E LIBRIS
IOHANNIS EVANS
D.C.L., LL.D
SOC.REG.S.
I DESIRE TO DESERVE

MBL/WHOI
0 0301 0053407 9

OBSERVATIONS

OF THE

INTERNATIONAL POLAR EXPEDITIONS,

1882–83.

FORT RAE.

LONDON:
PRINTED BY EYRE AND SPOTTISWOODE,
AND PUBLISHED BY
TRÜBNER & CO., 57 & 59, LUDGATE HILL.

1886.

Price Twenty-one Shillings.

ERRATA.

Page 142.	Oct. 2, 3 a.m.,	*for*	“ >1216 ”	*read*	“ <−108 ”.
	11 a.m.,	„	“ < 000 ”	„	“ <−108 ”.
„ 144.	Nov. 17, 3 a.m.,	„	“ >1080 ”	„	“ <−1080 ”.
	19, 6 a.m.,	„	“ >1080 ”	„	“ <−1030 ”.
	20, 1 a.m.,	„	“ >1080 ”	„	“ <−1030 ”.

TABLE OF CONTENTS.

	Page
Preface	v
Introduction	vii

METEOROLOGICAL OBSERVATIONS.

Atmospheric Pressure	2
Air Temperature	14
Vapour Tension and Relative Humidity	26
Wind	38
Amount, Form, and Direction of Clouds, also Hydrometeors	52
Aurora	98
Solar Radiation	110
Terrestrial Radiation	111
Exposed Thermometer on ground	112
Earth Temperatures	114

MAGNETICAL OBSERVATIONS.

Remarks	118
Declination	130
Horizontal Intensity	142
Vertical Intensity	154

Term Day Observations:—

September 15th	168
October 1st	170
„ 15th	172
November 1st	174
„ 15th	176
December 1st	178
„ 15th	180
January 2nd	182
„ 15th	184
February 1st	186
„ 15th	188
March 1st	190
„ 15th	192
April 1st	194
„ 15th	196
May 1st	198
„ 15th	200
June 1st	202
„ 15th	204
July 1st	206
„ 15th	208
August 1st	210
„ 15th	212

Term Hour Observations	214

A 17420. Wt. P. 237.

53499

Selected Undisturbed Days:— Page

Declination - - - - - - - 226
Horizontal Intensity - - - - - - 232
Vertical Intensity - - - - - - - 238
Hourly means of Selected Undisturbed Days - - - 244

Selected Disturbed Days:—

Declination - - - - - - - 246
Horizontal Intensity - - - - - - 248
Vertical Intensity - - - - - - 250

Journal of Auroral Observations - - - - - 253

PREFACE.

The observations, of which a record is contained in this volume, were made at Fort Rae, on the Great Slave Lake, during the 12 months extending from September 1, 1882 to August 31, 1883.

Fort Rae formed one of the series of circumpolar positions, occupied in accordance with the scheme proposed by the late Lieut. C. Weyprecht, for concerted physical observations, to be carried on for at least a full year, at different stations situated around the Poles.

The units of measure of the observations, the methods of reduction, the scales for graphical representation of the curves, and the form of publication, were fixed by the International Polar Committee at their meeting at Vienna in April 1884.

The expense of the Expedition was defrayed by grants from the British Government, and from the Government of the Dominion of Canada.

The management of the undertaking was vested in the Royal Society, and by the Society was entrusted to a Committee consisting of the following Fellows:—

The President, The Treasurer, The Secretaries (ex-officio)
John Rae, M.D.
Admiral Sir G. H. Richards.
Robert H. Scott.

The discussion of the magnetic observations has been carried out by myself, with the assistance of Mr. G. M. Whipple, of Kew Observatory. The meteorological discussions have been entirely carried out by Mr. R. Strachan and Mr. John A. Curtis of the Meteorological Office.

(Signed) H. P. Dawson,
Captain, R.A.

March 1886.

INTRODUCTION.

Fort Rae is one of the posts of the Hudson's Bay Company. It is situated in Lat. 62° 38′ 52″ N., and Long. 115° 43′ 50″ W. on a bay on the northern shore of the Great Slave Lake, and was selected for occupation as being the most northerly of the Company's posts, from which return would be possible, after the termination of the observations, before the closing of the rivers. Had Fort Simpson been the station selected, the observers might not improbably have been compelled to spend two winters at their post, as the route for return might not have been open till the summer of 1884.

Fort Rae is the nearest of all the Company's stations to the Magnetic Pole, and it presents another advantage of a very practical nature. Provisions at the post are usually plentiful, and this is by no means the case in all parts of the country. To have taken a year's full supplies for the party would have materially increased the cost and difficulty of transport.

It should here be stated that it is mainly owing to the interest taken in the undertaking by the Company's Directors in London, and to the co-operation cordially rendered by their officers in Canada that the Expedition was able to carry its appointed task to completion.

The Expedition also received material assistance, in the way of free transport of baggage, from the following railroad and steamboat companies:—The London and North-western Railway, the Grand Trunk Railway, and the Allan Line of Royal Mail Steamers.

It was not until the 3rd of April 1882 that the sanction of the Government was definitely obtained. It was at once decided that the organization should be military. Captain Henry P. Dawson, of the Royal Artillery, was appointed to command the party; the observers were Serjeant J. English and Serjeant F. Cooksley, both of the Royal Horse Artillery, with Gunner C. Wedenby, of the Royal Artillery, as artificer.

From the time of departure of the Expedition until its return, the conduct and discipline of these men was all that could be desired. They took great interest in the observations, and did their best to carry them out with accuracy and punctuality. They were always contented and cheerful, in spite of the inevitable discomforts of their winter quarters, and the occasional hardships of the journey.

The following was the equipment provided:—

Instruments:

- 2 mercurial barometers, Kew pattern (marine).
- 2 aneroid barometers.
- 2 cup-and-dial anemometers (small size).
- 1 rain gauge.
- 10 mercurial thermometers.
- 7 spirit ,,
- 2 maximum ,,
- 2 ,, (solar radiation) thermometers.
- 4 minimum thermometers.
- 2 minimum (terrestrial radiation) thermomcters.
- 2 hair hygrometers.
- 2 tubes for earth thermometers.
- 1 zinc thermometer screen (Wild's pattern).
- 1 unifilar magnetometer.
- 2 bifilar ,,
- 2 declinometers.
- 1 Lloyd's balance magnetometer.
- 1 dip circle.

Instruments—*continued.*

1 6-inch transit theodolite
1 6-inch sextant and artificial horizon
1 prismatic compass
1 chronometer watch
} Lent by Royal Geographical Society.

1 spectroscope with camera, Capt. Abney's pattern.
2 cameras with dry plates, &c.

Sundries :—

Blank forms for observations, tables, stationery, &c. :
1 chest carpenter's tools.
3 copper lanterns.
4 windows with spare glass.

Camp equipment :
2 tents.
1 waterproof sheet
3 blankets
} per man.
Axes, camp kettles, mosquito netting.
Knives, forks, plates, &c.

Each man received :
2 suits plain clothes.
1 capot.
1 worsted belt.
1 pair mitts.
1 rug.
1 fur cap.
1 leather (deerskin) suit.
1 pair snowshoes.
2 sets woollen underclothing.
2 mosquito nets.
Moccasins as required.

Stores :—

The chief items were :
Flour $\frac{3}{4}$ lb. per man per diem.
Sugar 400 lbs.
Bacon 300 lbs.
Tea 1 lb. per man per month.
Tobacco 1 lb. per man per month.
Vegetables (Chollet's preserved) 48 lbs.
Candles 56 lbs.
Oil 10 gals.

Small quantities of arrowroot, beef tea, &c. for use in case of sickness ; and raisins, curry powder, &c. for occasional use.

The following supplies were received at Fort Rae :—

2,300 lbs. fresh meat.
780 lbs. dried meat.
190 lbs. grease.
45 lbs. pemmican, for return journey.

In addition to fish, ducks, geese, &c.

Some of the above provisions were required for Indians in the employ of the Expedition.

A small quantity of beads, needles, pocket knives, handkerchiefs, &c. were taken for barter with Indians, but flour, matches, tea, sugar, and tobacco were found to be quite as acceptable.

Most of the above stores were, by the kindness of the Hudson's Bay officers, supplied at Winnipeg.

Everything was strongly packed in cases, the weight of each package not exceeding 90 lbs. for convenience of handling at portages.

The total weight of baggage instruments and provisions, on leaving Winnipeg, was between three and four tons.

The above supply of provisions was found to be quite sufficient, in fact the 300 lbs. of bacon were kept as a reserve and were never used at all. It would, however, be unwise for a future expedition of similar strength to take less than the quantities above given.

Trusting to the country for supplies is not without risk, as in some years provisions are very scarce, and instances of starvation are not unknown at the Hudson's Bay Company's posts.

The time available for preparation (not quite six weeks) was so short that it was not possible to have any instruments specially made for the Expedition, all that could be done was to select the most suitable of those that were in stock at Kew and at the Meteorological Office.

The Expedition sailed from Liverpool on the 11th May for Quebec, and travelled thence viâ Winnipeg to Carlton on the Saskatchewan. At Carlton it took leave of civilisation and travelled northwards, for the most part by boat, for two months, reaching Fort Rae on the 30th August.

This latter part of the journey was not so trying to the instruments as might have been supposed, as at the portages (where owing to rapids the boats have to be carried overland) it was possible to see that cases containing fragile instruments were treated with care, but when travelling by rail they could not always be protected from rough usage at the hands of railway employés. Transport in springless bullock carts over exceedingly rough roads also exposed the instruments to many unavoidable concussions.

On the Great Slave Lake, the crossing of which, owing to stormy weather, occupied eight days, the boat was stove in, and sunk in a gale; some of the provisions were damaged and destroyed, and most of the cases of instruments were submerged.

Fig. 1.
Map of part of the Great Slave Lake.

An arm of this lake, at first broad, but afterwards contracting in places to a width of a few miles, extends in a north-westerly direction for about a hundred miles (Fig. 1, p ix.) It is continued by a chain of lakes for a long distance in the direction of Great Bear Lake; in fact, a canoe meets with but few interruptions in passing from one lake to the other. This gulf appears to be the boundary between two different geological formations. To the south-west is a limestone tableland, elevated some 300 feet above the level of the lake, and extending to the Mackenzie River. At a short distance from the lake this tableland ends abruptly, and at the foot of the cliff a former beach of the lake is seen. This beach is now 20 or 30 feet above the present level of the lake, which appears to be gradually falling.

On the north-east side of the gulf a plain only slightly elevated above the lake extends as far as the eye can reach. Granite hills rise here and there like islands from the plain, which evidently, at no very distant date, formed a part of the bottom of the lake.

The surface is generally a fine white sand, sometimes rock (quartz or granite, rounded by the action of ice) and sometimes "muskeg" or swamp. Beyond this, at a distance of

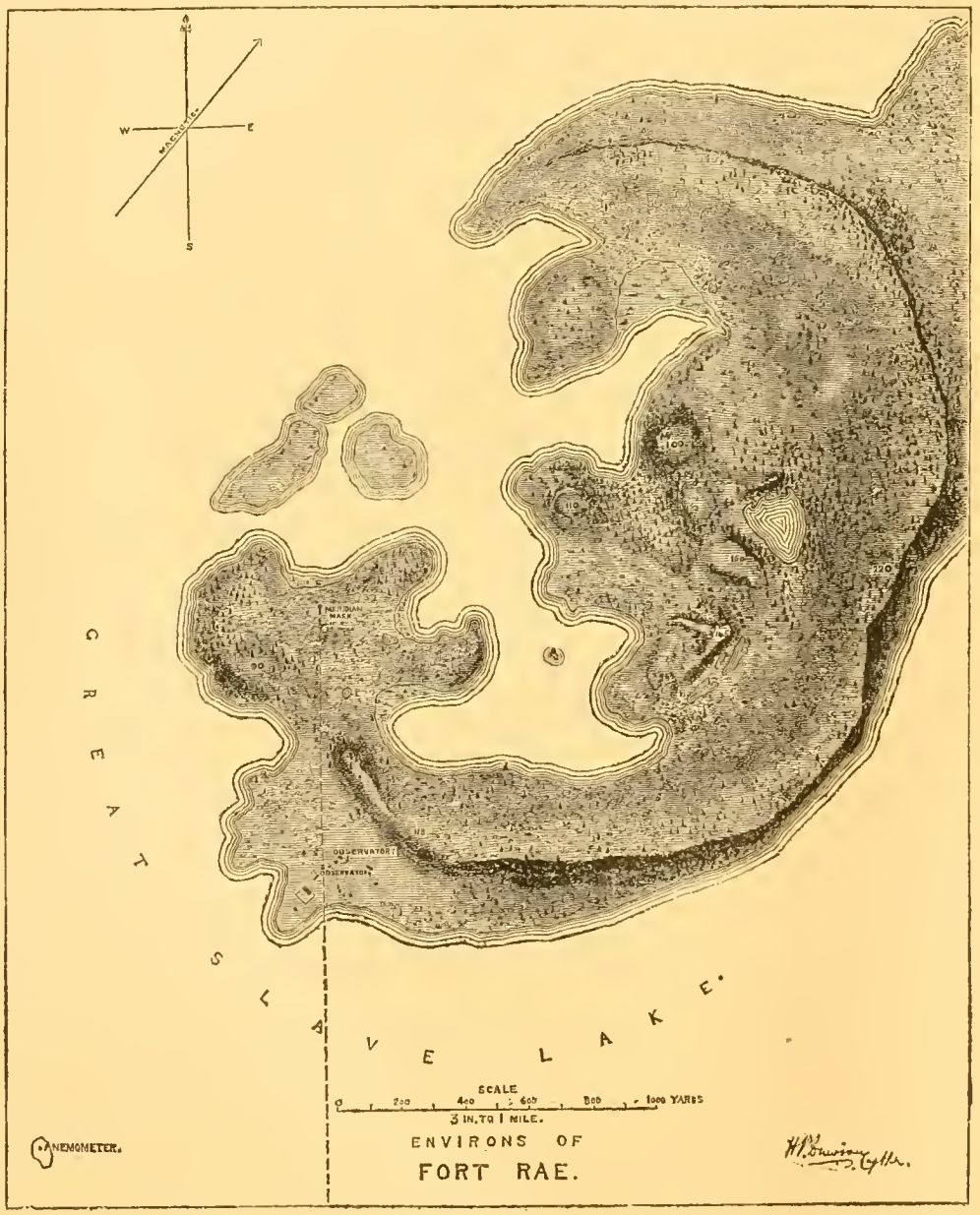


Fig. 2.

30 miles or so to the north and east the "barren lands" begin: a rocky country, destitute of trees, though not of vegetation, extending to the coast of the Arctic ocean. This is the home of the musk ox and the reindeer. It is the great hunting ground of the Indians and the source of the food supply of the district.

Nearer the lake the country is covered with birch, willow, and pine, as a rule small and stunted, though in sheltered places the last-named trees sometimes attain a fair size.

The peninsula of Nu-chié (the mountain island) as the Indians call it, projects from the north-east shore, and is the only locality where limestone appears on that side of the bay. It is almost an island, being only joined to the mainland by a small patch of swamp, and consists of a crescent-shaped hill of the height of about 220 feet, precipitous on the outside and sloping more gently to the lake on the inside (Fig. 2, p. x). At the south-west extremity of this peninsula, at the foot of the hill, is a small extent of level ground. Here is the Hudson's Bay Company's post of Fort Rae, some half dozen log huts, with a large store for provisions, furs, and goods, for trading with the Indians.

The lake at this place is shallow, and there is a constant current from the north-west, caused by two rivers that enter the head of the gulf. The gulf contains numerous islands, especially along the north-east shore.

It was 10 p.m. on the 30th August when Fort Rae was reached. The 31st was occupied in unpacking the instruments and stores. The barometer, an anemometer, and the thermometer screen, with wet and dry bulb thermometers, were at once placed in position so as to enable observations to be commenced at midnight. There was most fortunately at the spot an unfinished and unoccupied building, admitting of conversion into a Magnetic Observatory. It was a log hut, built for a store, and a door and windows having been put in, a floor laid down and a fireplace built, it answered its purpose very well.

The instruments, on the whole, had suffered little from the journey, one of the barometers and two thermometers were broken, a few screws had shaken loose from some of the magnetic instruments, and a mirror required to be re-silvered. These and other similar small repairs were executed whilst the Observatory was being prepared for their reception, and on the 3rd September the declinometer, on the 4th the bifilar, and on the 6th the balance magnetometer, were mounted in their places, and observations commenced therewith.

The performance of the magnetic instruments was satisfactory, with the exception of the balance magnetometer, as mentioned hereafter, p. 119. Metallic suspension would have been preferable to silk for the bifilar magnet.

These instruments were mounted on wooden pillars, sunk to a depth of more than three feet in the ground. Stone pillars would have been better for the purpose, but the only stone available would have required so much cutting that even had the necessary tools been at hand, so much time would have been consumed in the preparation of the pillars that the observations could not have been commenced until late in September.

The latitude, longitude, and time were all determined with the transit theodolite.

The longitude adopted is deduced from 10 observations of moon-culminating stars, the latitude from the prime vertical transit of α Ursæ Majoris. The observations were timed by a chronometer watch whose going was frequently checked by the transit instrument, and its rate was found to vary but little throughout the year.

The hourly observations were commenced at midnight on the 31st August, the hours were thus divided between the three observers:—A. was on duty from 6h. 30m. a.m. to 6h. 30m. p.m.,

B from 6h. 30m. to 10h. 30m. p.m., C from 10h. 30m. p.m. to 2h. 30m. a.m., A from 2h. 30m. to 6h. 30m. a.m., and so on. The term days were the 1st and 15th of each month; on these days the magnetic instruments were read every five minutes, and in addition the declinometer was read every 20 seconds, for a selected hour.

The Magnetic Observatory was finished about the 14th September, and a new building for absolute magnetic observations was commenced and completed by the middle of October. This Observatory was also used for the transit instrument, the roof being provided with shutters in the meridian.

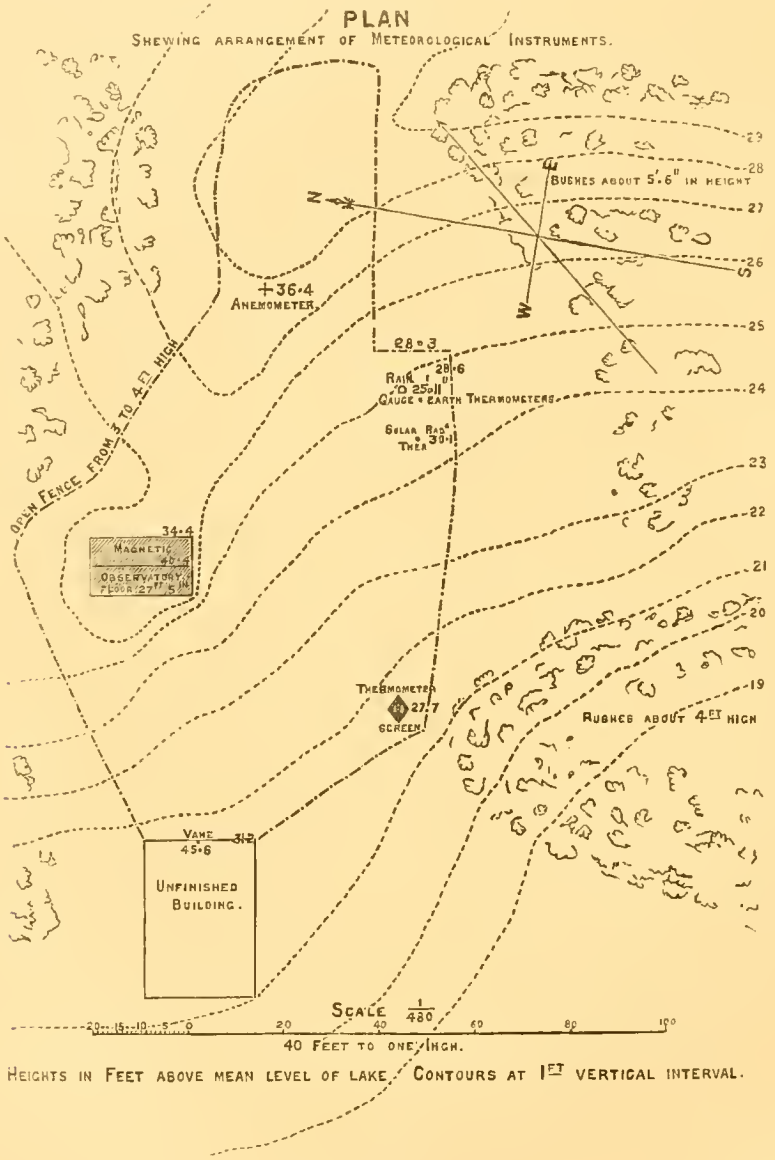


Fig. 3.

Only one observer being as a rule available both for magnetic and meteorological observations, the meteorological instruments were placed, as shown in annexed plan (Fig. 3), near to the Magnetic Observatory. They were read at each hour in the following order:—barometer, anemometer, dry and wet bulb thermometer, hair hygrometer, wind, clouds, weather, and aurora. The self registering thermometers were read at 9 a.m. every morning, and at the same hour the amount of rain or snow in the rain gauge was recorded, and on alternate days the readings of the earth thermometers. The solar radiation thermometer was read at the first hour after sunset.

The barometer, which was a Marine Barometer, Kew pattern, was placed in the Observatory, with its cistern 18 ft. above the level of the lake. It was hung in a good light, and screened from the sun, and from the fire. It appeared to be in good order, and its performance was quite satisfactory, as far as could be judged by comparison with the aneroid. The instrument was not brought back to England for re-verification on account of the great probability of damage on the journey home, and had it been found to be out of order on receipt there would have been no possibility of determining whether the injury had been received before or after leaving Fort Rae. It has been already explained that one barometer was broken on the way out.

The dry and wet bulb mercurial and spirit thermometers were placed in a zinc screen, of Professor Wild's pattern, with their bulbs 5 ft. 10 ins. (1·77 m.) above the ground. During the winter this height was reduced by 8 or 9 ins., owing to the accumulation of snow. The maximum and minimum thermometers and a hair hygrometer were placed in the same screen. In February a wooden roof was added to protect the screen from the rays of the sun.

The rim of the rain gauge was kept at a height of 1 ft. (·32 m.) above the surface of the ground or of the snow. The solar radiation thermometer was placed vertically, with the bulb uppermost, and 5 ft. 8 ins. (1·72 m.) above the ground.

The terrestrial radiation thermometer was supported horizontally by two forked sticks, with its bulb 1 inch above the surface of the soil. During the winter it was placed on the surface of the snow, as also was an ordinary spirit thermometer, whose readings have been recorded hourly in clear and calm weather for comparison with the air temperature at the time.

The earth thermometers were fastened to a lath at intervals of 1 ft., and placed in a copper tube, which was sunk vertically in the ground. As the surface had a slope of $\frac{1}{16}$ to the S.W., and, as it was cleared of vegetation, it no doubt received more of the sun's heat than a normal portion of the earth's surface in this latitude. There was but little choice of position owing to the rocky nature of the soil, a circumstance which prevented observations of temperature being made at a greater depth than 4 feet. At first the thermometers were placed in the tube without any packing, but as the weather became colder, they were so rapidly affected by the temperature of the external air on being withdrawn from the tube that there was not time to record their readings before they began to change; they were therefore surrounded with strips of fur (on the 4th November), and thenceforward the readings were much more regular. The fur, however, proved attractive to some beast of prey, probably a carcajou (wolverine), which on the night of the 11th January managed to extract the thermometers from their tube, breaking them all. The observations were continued with other thermometers, which were coated this time with cotton wool, and no further interruption took place.

The position of the Observatory rendered it difficult to find a good position for the anemometer, on account of the hill to the north-east. Winds from this quarter were, however, rare, and the anemometer was well exposed to the prevalent winds, which were north-westerly and south-easterly. The estimated force by Beaufort's scale has been used in the reductions, a comparison having shown a close agreement with the anemometer readings. An anemometer was placed on an island in the lake, but it was so frequently stopped by snow drifting into the works that no use has been made of its readings.

In the winter it was found necessary to surround the meteorological instruments with a fence, to prevent the attention of the observer on duty being distracted by the possible visit of a wolf. These animals, which are here large and formidable, often roamed at night amongst the buildings of the post.

There was but little cloud in winter; what there was was usually thin stratus and cirro-stratus, and it did not appear to be at a high level. The S.W. wind was, however, attended with high cirrus clouds. A smoky haze was frequent in the summer, which was probably due to forest fires to the south of the lake.

Parhelia, paraselenæ, and haloes were of common occurrence. On two occasions parhelia were observed at sunset, between the observer and the opposite shore of the lake (distant four or five miles).

The prismatic colouring of cirrus and cirro-stratus clouds in the neighbourhood of the Sun was frequently observed in the spring and summer, and was a phenomenon at times of great beauty. The colouring was once noticed to extend to a distance of 30° 40′ from the Sun.

Aurora was observed on every clear night throughout the winter, as will be seen from the tables, pp. 98–109. The journal of auroras has been printed *in extenso*, and the readings of the magnetic instruments at the time have been added, either as specimens of the disturbance that accompanies aurorà, or where a marked change of reading has coincided with some phase of the phenomenon; but as only one observer was generally available, simultaneous observations could not often be carried out.

The height of the aurora appeared to vary greatly; it was twice noticed between the observer and a mass of cloud.

It was not found possible to obtain photographs either of the aurora or of its spectrum. Captain Abney suggests that this was probably due rather to the effect of the low temperature on the sensibility of the plate than to the faintness of the light of the aurora.

The first snow fell on the 27th September, but it was not until a month later that the lake froze. The residents all agreed that the season was a very exceptional one, the winter being unusually mild, and late in setting in. At the end of November the Mackenzie river was still nearly free from ice, whereas it is usually full of drifting ice in October and frozen over in November. There was also much less snow than usual. A party of Indians who came in on the 16th January reported that the country 50 miles to the N.N.W. was quite bare of snow, the ground being not even white. The winter was also unusually free from storms, which from all accounts, and from the journal kept at the station, seem to be both frequent and severe in ordinary years.

The snow began to disappear about the middle of April, and on the 3rd June the ice began to break up. By the 16th it had entirely disappeared from the neighbourhood of Fort Rae, though it was visible for some time longer on the horizon in the direction of the main lake.

The trees first showed signs of budding on the 16th May, and on the 1st June they were in full leaf; when the party left the place on the 1st September they were already yellow and beginning to lose their leaves.

The observations being concluded, the return journey was accomplished without difficulty, and England was reached on the 20th November 1883.

FORT RAE.

METEOROLOGICAL OBSERVATIONS.

September 1882. 700 mm. + Mean time of place.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	39·61	39·97	39·99	41·29	41·49	42·46	43·54	44·34	45·63	45·96	46·80	47·38	47·64	47·91
2	47·84	47·79	47·54	47·15	47·10	47·23	47·18	47·25	46·64	46·64	46·57	46·85	47·35	47·71
3	50·23	50·18	50·15	49·79	49·59	49·97	50·99	51·16	51·72	51·86	51·86	51·86	51·93	52·08
4	52·48	52·77	52·82	52·92	53·15	53·10	53·02	52·48	52·74	52·28	51·96	51·65	51·60	51·75
5	50·91	50·81	50·69	49·94	50·33	50·69	50·56	50·56	50·48	50·40	50·35	49·82	49·69	49·89
6	48·98	49·03	49·01	48·81	48·52	48·02	48·27	48·10	47·94	47·54	47·08	46·69	46·52	46·32
7	42·35	41·64	41·13	40·78	40·75	40·27	39·78	39·76	39·56	39·28	38·82	38·80	38·44	38·36
8	38·14	38·56	38·31	38·21	39·16	39·48	39·61	39·89	40·24	40·40	40·78	40·70	40·93	41·10
9	42·76	42·81	42·86	43·09	43·24	43·52	43·49	43·37	43·34	43·44	43·27	43·39	43·27	43·12
10	41·67	41·54	40·90	40·98	40·65	40·95	41·10	41·05	40·78	40·75	40·43	40·09	39·78	39·46
11	35·72	35·19	34·84	34·53	34·18	33·51	33·03	32·65	31·48	33·18	32·98	32·62	32·37	32·27
12	29·02	28·69	28·84	28·38	27·98	27·42	26·58	26·20	25·74	25·59	25·44	25·16	25·41	25·46
13	25·66	25·61	25·44	25·46	25·86	26·37	26·98	27·34	27·49	27·85	28·10	28·86	29·32	29·93
14	32·81	32·75	33·01	33·33	33·57	34·40	34·65	34·91	35·52	35·50	35·87	36·08	36·74	37·07
15	42·20	42·97	43·12	43·98	44·05	44·34	44·86	45·53	45·68	46·21	46·34	46·49	46·75	47·03
16	48·67	48·55	48·45	48·40	48·10	48·02	47·94	47·74	47·61	47·33	46·98	46·67	46·29	45·98
17	43·22	43·02	42·68	42·12	41·80	42·61	42·27	42·27	41·92	41·75	41·72	41·61	41·41	41·10
18	39·94	39·99	41·00	41·26	41·05	40·98	40·75	40·95	40·90	41·05	41·10	41·03	41·21	41·26
19	37·53	37·07	36·48	36·08	35·70	35·42	35·37	34·99	34·75	34·75	34·55	34·48	34·45	34·78
20	37·02	37·78	37·70	37·80	38·16	39·53	39·76	39·83	40·34	40·88	41·61	42·17	42·76	43·39
21	47·05	47·08	48·50	49·16	49·32	49·69	49·54	49·79	50·15	50·05	50·30	50·43	50·30	50·43
22	50·64	50·69	50·33	50·61	50·74	50·71	50·53	50·50	50·50	50·35	50·20	49·92	49·49	49·21
23	46·69	46·39	45·63	45·17	45·05	45·56	45·25	44·76	44·21	43·93	43·93	43·88	43·49	43·14
24	42·30	42·56	43·80	44·15	44·41	44·84	45·00	45·61	45·98	46·32	46·29	46·18	46·11	45·76
25	37·24	35·87	34·48	33·69	33·59	33·41	33·26	33·16	33·16	33·16	33·59	33·59	33·51	33·79
26	36·23	36·72	37·07	37·45	38·34	39·94	40·34	40·75	41·24	41·41	41·95	42·48	42·88	43·44
27	46·54	46·88	48·15	48·40	48·67	48·70	47·99	48·15	48·42	49·97	50·28	50·43	50·64	50·79
28	53·70	53·89	54·16	54·11	54·11	54·19	54·72	55·05	55·26	55·16	55·21	55·18	54·82	54·75
29	54·62	54·52	54·19	53·86	53·73	54·42	54·52	54·47	54·37	54·34	54·31	54·40	54·67	54·87
30	56·94	56·91	58·38	58·31	58·63	58·76	59·19	59·24	59·53	59·63	59·88	59·93	60·08	60·18
Mean -	43·29	43·27	43·32	43·32	43·37	43·62	43·67	43·73	43·85	43·90	43·95	43·95	44·00	44·08

October 1882. Lat. + 62° 38′ 52″.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	61·10	61·32	62·07	61·83	61·86	62·07	62·19	62·42	62·37	62·32	62·32	61·91	61·53	60·82
2	56·78	56·65	56·22	55·79	55·13	54·70	55·18	55·00	54·90	54·50	54·42	54·04	53·43	53·40
3	51·77	52·21	52·59	53·04	53·02	52·97	52·84	52·79	52·74	52·69	52·62	52·16	51·75	51·37
4	49·89	49·82	49·52	49·23	48·70	48·62	48·55	48·25	47·76	47·25	46·88	46·39	45·66	45·10
5	40·19	40·22	39·61	39·07	39·16	40·27	40·34	41·16	41·39	41·87	41·85	42·02	42·22	42·58
6	42·48	42·63	43·42	43·29	43·34	43·39	43·54	43·29	43·44	43·14	42·97	42·86	42·68	42·48
7	41·24	40·98	41·00	40·93	40·95	40·78	40·75	40·73	40·73	40·80	40·88	40·85	40·73	40·65
8	40·83	40·83	40·27	39·99	40·27	41·26	41·21	41·29	41·49	41·61	41·56	41·70	41·59	41 46
9	39·51	39·43	39·33	38·97	38·62	38·24	37·70	37·29	37·07	36·84	36·23	35·90	35·37	34·68
10	31·81	31·74	31·84	31·89	32·11	32·55	33·13	33·13	33·67	33·99	34·23	34·28	34·53	34·65
11	36·28	36·23	36·43	36·36	36·46	36·56	36·48	36·72	36·72	36·51	36·53	36·53	36·59	36·48
12	35·50	35·21	34·86	34·70	34·35	34·28	34·08	34·20	33·94	33·84	33·82	33·64	33·46	33·41
13	32·98	32·98	33·01	33·03	33·11	33·16	33·31	33·43	33·69	34·02	34·23	34·48	34·53	34·70
14	37·60	37·80	38·21	38·41	38·72	39·07	39·31	39·51	39·81	40·07	40·19	40·45	40·68	40·65
15	40·50	40·45	40·29	40·22	40·27	40·09	39·89	39·41	39·23	39·13	38·90	38·49	37·70	37·50
16	37·83	38·01	38·06	38·11	38·26	38·56	38·97	39·18	39·53	39·76	40·34	40·58	40·90	41·44
17	43·02	43·24	43·47	43·49	43·57	43·57	43·57	43·57	43·73	43·73	43·67	43·27	43·12	43·07
18	38·59	37·99	37·38	37·12	36·84	36·43	35·87	35·85	35·72	35·42	35·14	34·89	34·73	34·70
19	35·29	35·60	35·77	35·90	36·23	36·53	37·04	37·24	37·45	37·68	38·19	38·41	38·70	39·16
20	40·58	40·45	40·45	40·29	40·40	40·32	40·43	40·58	40·53	40·50	40·63	40·65	40·78	40·88
21	39·68	39·41	38·77	38·24	37·63	37·22	37·04	36·48	36·28	35·50	35·11	34·81	34·81	34·65
22	33·28	33·28	33·36	33·36	33·26	33·33	33·51	33·43	33·08	33·31	33·64	33·64	33·69	33·89
23	36·18	36·59	36·69	36·92	37·09	37·32	37·58	37·70	37·94	38·19	38·31	38·62	38·67	38·80
24	40·09	40·29	40·43	40·58	40·75	40·83	40·98	41·29	41·34	41·31	41·59	41·56	41·67	41·67
25	41·72	41·72	41·61	41·59	41·56	41·51	41·36	41·31	41·26	41·03	40·95	40·95	41·03	40·68
26	41·05	40·98	41·21	41·34	41·36	41·46	41·44	41·59	41·54	41·64	41·41	41·24	41·26	41·13
27	41·21	41·34	41·46	41·31	41·64	41·90	42·02	42·40	42·63	42·76	42·99	43·02	42·88	42·53
28	38·72	38·29	37·43	36·72	36·21	35·04	34·33	33·79	33·36	33·13	32·70	32·32	32·19	32·01
29	31·64	31·71	31·61	31·74	31·79	32·14	32·50	32·75	33·01	33·46	34·02	34·65	35·29	35·57
30	40·90	41·26	41·92	42·61	42·97	43·73	44·39	44·79	45·42	45·91	46·52	47·05	47·64	48·22
31	52·11	52·28	52·64	52·94	53·40	53·73	54·40	54·70	54·97	55·00	55·33	55·56	55·64	56·02
Mean -	40·98	41·00	41·00	40·93	40·93	41·03	41·08	41·13	41·19	41·19	41·24	41·19	41·13	41·10

Correction for Gravity +1·17 mm. at 754 mm. Barometer _____ m. above sea level. *September* 1882.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
49·18	49·34	49·06	49·13	48·72	48·81	47·81	47·23	47·66	47·99	45·78	49·34	39·61	9·73
47·76	47·84	47·86	47·99	48·07	48·70	49·11	49·59	49·77	50·13	47·81	50·13	46·57	3·56
52·31	52·23	52·21	52·33	52·56	52·41	52·72	52·53	52·06	52·03	51·52	52·72	49·59	3·13
51·60	51·42	51·21	51·14	51·14	51·16	51·21	51·24	51·19	50·99	51·96	53·15	50·99	2·16
49·82	49·84	49·84	49·54	49·13	49·18	49·26	48·93	49·08	49·08	49·94	50·91	48·93	1·98
45·78	45·76	45·27	44·97	44·34	43·75	43·93	43·98	43·07	42·66	46·44	49·03	42·66	6·37
38·72	38·70	38·67	38·70	38·21	38·29	38·49	38·44	38·39	38·62	39·38	42·35	38·21	4·14
41·16	41·39	41·64	41·90	41·59	42·17	43·14	42·10	42·73	42·61	40·68	43·14	38·14	5·00
43·22	42·51	42·35	42·37	42·25	41·51	42·07	41·61	42·07	41·77	42·78	43·52	41·51	2·01
39·31	38·90	38·70	38·16	38·09	38·04	37·43	37·19	36·43	36·23	39·53	41·67	36·23	5·44
32·21	31·99	32·11	32·06	31·20	30·97	30·94	30·74	29·83	29·32	32·57	35·72	29·32	6·40
25·31	25·81	26·10	26·27	25·86	25·44	24·93	24·95	25·81	25·74	**26·35**	29·02	**24·93**	4·09
30·27	30·77	31·28	31·61	31·76	31·96	32·24	32·45	32·21	32·27	29·05	32·45	25·44	7·01
37·68	38·16	38·72	39·31	39·41	40·02	40·70	40·45	41·70	41·85	36·84	41·85	32·75	9·10
47·10	47·35	47·56	47·76	47·76	47·40	47·66	47·61	48·67	48·57	46·13	48·67	42·20	6·47
45·63	45·27	45·00	44·64	44·34	44·15	44·05	43·85	43·59	43·59	46·29	48·67	43·59	5·08
40·93	40·93	40·80	40·68	39·76	39·66	40·19	39·89	39·43	39·41	41·31	43·22	39·41	3·81
41·00	40·75	40·78	40·40	39·48	39·33	38·67	37·91	38·29	37·94	40·29	41·26	37·91	3·35
34·84	34·86	34·94	35·45	35·97	36·18	35·82	36·02	36·33	36·87	35·57	37·53	34·45	3·08
44·10	44·74	45·42	45·81	46·11	46·52	46·69	46·75	46·83	46·95	42·46	46·95	37·02	9·93
50·33	50·30	50·13	50·20	49·57	49·57	49·34	49·92	50·56	50·76	49·69	50·76	47·05	3·71
48·93	48·52	48·60	48·42	47·96	47·99	47·86	47·66	47·23	46·88	49·37	50·74	46·88	3·86
42·94	42·78	42·56	42·51	42·40	42·35	42·48	42·76	41·90	41·97	43·83	46·69	41·90	4·79
45·40	45·15	44·61	44·10	43·07	42·37	41·13	40·07	39·28	38·46	43·88	46·32	38·46	7·86
33·89	34·18	34·58	34·89	35·19	35·47	35·75	36·16	36·05	35·90	34·48	37·24	33·16	4·08
43·73	44·18	44·49	45·00	45·32	45·56	46·06	46·16	46·67	46·34	42·25	46·67	36·23	10·44
51·04	51·21	51·65	51·80	51·45	51·57	51·60	51·98	53·15	53·40	50·13	53·40	46·54	6·86
54·57	54·77	54·95	55·13	55·23	55·23	55·07	55·07	54·72	54·67	54·75	55·26	53·70	1·56
55·43	55·56	55·94	56·02	56·09	56·45	56·70	57·01	56·78	56·68	55·16	57·01	53·73	3·28
60·39	60·49	60·41	60·29	60·46	60·66	60·75	61·25	60·80	60·92	**59·68**	**61·25**	56·91	4·34
41·15	44·18	44·26	**44·29**	44·08	44·10	44·13	44·05	44·08	44·03	43·85	46·22	41·13	5·09

Long.—115° 43′ 50″= −7h. 42m. 55s. *October* 1882.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
60·39	60·24	59·63	59·34	58·94	58·61	58·26	57·67	57·26	57·01	**60·56**	**62·42**	57·01	5·41
52·99	52·79	52·64	52·64	52·31	52·21	52·67	52·89	52·16	51·93	53·99	56·78	51·93	4·85
51·29	50·96	50·91	50·43	49·84	49·47	49·08	49·01	50·10	50·05	51·50	53·04	49·01	4·03
44·41	43·75	43·34	43·22	42·32	41·80	41·51	41·24	40·70	40·27	45·61	49·89	40·27	9·62
42·83	42·88	42·83	42·83	43·19	43·37	43·49	43·62	43·04	42·46	41·77	43·62	39·07	4·55
42·17	42·00	41·77	41·67	41·03	40·63	40·55	40·58	41·36	41·26	42·32	43·54	40·55	2·99
40·73	40·70	40·70	40·27	40·40	40·60	40·60	40·48	40·63	40·68	40·75	41·24	40·27	0·97
41·46	41·44	41·29	41·00	40·78	40·73	40·70	40·53	40·43	39·97	40·98	41·70	39·97	1·73
34·35	34·02	33·64	33·26	32·98	32·70	32·35	32·21	32·04	31·89	35·62	39·51	31·89	7·62
34·75	35·09	35·24	35·50	35·52	35·67	35·97	36·18	36·18	36·16	34·15	36·18	31·74	4·44
36·53	36·53	36·72	36·87	36·77	36·77	36·56	36·36	36·05	35·75	36·48	36·87	35·75	1·12
33·28	33·28	33·21	33·21	33·06	32·96	32·88	32·88	32·83	32·83	33·74	35·50	32·83	2·67
35·04	35·29	35·55	35·50	35·85	35·97	36·36	36·74	37·12	37·38	34·65	37·38	32·98	4·40
40·78	40·93	40·88	41·03	40·90	41·05	41·05	41·03	40·75	40·70	39·99	41·05	37·60	3·45
37·65	37·58	37·53	37·48	37·48	37·35	37·48	37·43	37·55	37·68	38·65	40·50	37·35	3·15
41·77	42·02	42·40	42·53	42·68	42·71	42·58	42·76	42·81	43·02	40·63	43·02	37·83	5·19
42·66	42·32	41·92	41·61	41·10	40·78	40·34	39·89	39·36	39·02	42·37	43·73	39·02	4·71
34·84	34·86	34·86	34·81	34·81	34·89	34·81	34·78	34·91	35·09	35·65	38·59	34·70	3·89
39·43	39·66	39·81	40·12	40·22	40·34	40·27	40·50	40·45	40·58	38·36	40·58	35·29	5·29
41·03	40·95	41·13	40·95	41·05	40·78	40·58	40·37	40·17	40·09	40·60	41·13	40·09	1·04
34·50	34·23	33·82	33·77	33·59	33·33	33·16	33·03	33·13	33·36	35·47	39·68	33·03	6·65
33·89	34·33	34·53	34·81	34·89	35·01	35·26	35·42	35·62	35·90	34·08	35·90	33·08	2·82
39·05	39·07	38·97	39·23	39·33	39·48	39·61	39·63	39·73	40·02	38·36	40·02	36·18	3·84
41·80	41·90	41·95	42·00	41·95	41·85	41·80	41·72	41·80	41·67	41·36	42·00	40·09	1·91
40·63	40·60	40·70	40·83	40·80	40·98	41·03	41·13	41·10	41·05	41·13	41·72	40·60	1·12
41·26	41·00	41·05	40·80	40·65	40·63	40·65	40·63	40·73	41·08	41·13	41·64	40·63	1·01
42·71	42·63	42·30	41·85	41·87	41·56	41·05	40·58	39·83	39·36	41·82	43·02	39·36	3·66
31·89	31·51	31·64	31·66	31·71	31·89	31·99	31·94	31·81	31·59	**33·48**	38·72	**31·51**	7·21
36·28	36·89	37·40	38·01	38·24	38·72	39·02	39·36	39·78	40·29	35·24	40·29	31·61	8·68
48·65	48·98	49·67	50·02	50·35	50·76	50·94	51·09	51·24	51·57	46·95	51·57	40·90	10·67
56·12	56·32	56·32	56·55	56·58	56·73	56·60	56·55	56·29	56·32	55·13	56·73	52·11	4·62
41·13	41·13	41·10	41·08	41·00	40·98	40·93	40·90	40·88	**40·83**	41·05	43·15	38·85	4·30

November 1882. 700 mm. + Mean time of place.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	56·12	55·82	55·56	54·90	54·50	54·01	53·23	52·69	51·88	51·47	51·01	49·97	48·93	48·20
2	34·33	33·38	32·91	32·35	31·76	31·23	30·84	30·72	30·62	30·59	30·92	31·10	31·13	31·51
3	41·08	42·02	42·61	42·99	43·83	44·24	44·71	44·79	45·66	45·81	45·68	45·93	45·83	45·61
4	44·31	44·03	43·67	43·47	43·57	43·57	43·47	43·34	43·47	43·39	43·29	43·19	42·97	42·99
5	43·42	43·52	43·75	43·64	43·64	43·42	43·49	43·54	43·52	43·78	43·75	43·59	43·57	43·49
6	45·42	45·56	45·68	45·91	46·11	46·34	46·80	47·05	47·28	47·61	47·76	47·71	47·81	48·15
7	49·52	49·59	50·08	50·08	50·33	50·53	50·81	50·94	51·14	51·35	51·65	51·65	51·75	51·96
8	53·65	53·73	53·83	53·78	53·83	53·78	53·65	53·28	52·69	52·33	52·01	51·52	50·53	49·67
9	47·69	48·12	48·52	48·83	49·21	49·47	49·64	50·23	50·23	50·38	50·08	50·05	49·67	49·39
10	48·22	47·74	47·61	47·30	47·00	46·62	46·27	45·93	45·83	45·68	44·94	44·81	44·24	44·05
11	40·40	40·27	40·07	39 97	39·58	39·43	39·10	39·18	38·87	39·00	38·75	38·39	38·31	38·04
12	34·08	33·92	33·59	32·96	32·75	32·81	32·27	31·89	31·08	30·52	29·91	29·10	28·13	27·11
13	21·40	21·35	21·35	21·90	23·02	24·17	25·84	27·78	29·07	30·97	32·32	34·75	36·21	37·50
14	40·78	40·50	40·27	39·97	39·81	39·58	39·36	39·07	39·21	39·48	39·83	39·99	40·29	40·75
15	44·86	44·97	45·07	45·17	44·74	44·66	44·59	44·66	44·51	44·13	43·88	43·39	42·99	42·22
16	30·72	29·83	29·15	28·84	27·98	26·78	25·86	26·71	26·53	26·43	26·48	26·76	27·03	27·47
17	33·13	33·67	34·91	35·75	36·59	37·48	37·58	38·41	38·72	38·87	39·51	39·73	39·58	39·05
18	34·75	34·75	34·28	33·97	33·77	33·92	33·89	33·84	33·84	33·54	33·33	33·06	33·13	32·93
19	30·06	29·93	29·88	29·83	29·96	30·01	30·49	30·84	30·89	31·35	31·66	32·19	32·70	33·57
20	41·70	42·35	42·99	43·75	44·26	44·86	45·27	45·78	46·13	46·39	46·57	46·78	47·25	47·20
21	48·32	48·12	47·48	47·40	47·05	46·67	46·62	46·72	46·39	46·34	46·29	46·06	46·01	45·78
22	46·64	46·78	46·67	46·47	46·39	46·32	46·39	46 37	46·37	46·03	45·86	45·63	45·53	45·20
23	43·67	43·52	43·78	44·03	43·85	43·88	43·70	43·54	43·75	43·90	43·78	44·05	44·24	44·39
24	44·97	45·20	45·30	45·32	45·42	45·42	45·53	45·53	45·86	45·88	45·98	46·13	46·49	46·52
25	48·15	48·02	48·27	48·07	48·02	48·15	48·27	48·42	48·37	48·27	48·25	48·25	48·27	48·20
26	48·10	48·15	47·86	47·61	47·40	47·48	47·48	47 43	47·99	48·35	48·37	48·55	48·75	48·88
27	53·83	54·24	54·50	54·21	54·60	54·62	54·87	55·13	55·23	55·51	55·53	55·33	55·33	55·72
28	52·74	52·74	51·65	50·71	49·84	48·81	48·07	46·93	45·56	44·46	43·59	42·51	41·36	40·27
29	39·56	40·32	41·75	42·25	43·12	43·93	44·34	45·10	45·58	46·47	46·83	47·45	48·30	48·91
30	55·97	56·45	56·60	57·16	57·97	58·53	58·68	58·88	59·17	59·45	59·50	59·39	59·27	59·45
Mean -	43·24	43·29	43·32	43·29	43·34	43·37	43·37	43·49	43·52	**43·59**	43·57	43·57	43·52	43·47

December 1882. Lat. + 62° 38′ 52″.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	58·83	58·43	58·41	58·31	58·07	58·07	58·10	57·75	57·85	57·82	57·85	57·70	57·70	57·54
2	58·63	59·07	58·71	58·23	58·00	57·82	57·49	56·91	56·27	55·72	54·92	54·29	53·94	53·02
3	48·02	47·94	48·10	48·07	48·25	48·25	48·67	48·93	49·18	49·32	49·47	49·74	49·97	50·13
4	50·89	50·76	50·66	50·30	50·33	50·18	49·99	49·67	49·37	49·06	48·70	48·62	48·40	48·40
5	55·21	56·32	57·95	58·36	59·22	60·26	61·30	61·91	62·57	63·13	63·66	64·05	64·45	64·71
6	65·13	64·81	64·20	63·76	62·95	62·24	61·58	60·90	60·25	59·32	58·71	57·97	57·36	56·80
7	48·67	47·66	47·15	46·34	45·51	44·81	43·88	43·37	42·86	42·48	41·97	41·59	40·95	40·68
8	37·50	37·22	37·29	37·29	37·35	37·48	37·68	37·91	38·16	38·46	39·05	39·18	39·56	39·81
9	43·22	43·52	43·62	43·67	44·08	44·18	44·79	45·20	45·25	45·61	45·96	46·29	46·62	47·25
10	52·11	52·26	52·74	52·79	53·02	53·10	53·28	53·58	53·80	53·63	53·63	53·75	53·70	53·78
11	55·99	56·45	57·01	57·36	57·70	57·70	58·02	58·43	58·71	58·99	59·07	59·14	59·27	59·55
12	60·36	60·26	60·05	59·93	59·93	60·00	59·83	59 88	59·83	59·80	59·70	59·55	59·39	59·32
13	57·56	57·54	57·49	57·24	56·70	56·50	56·02	55·79	55·82	55·56	55·18	54·72	54·57	54·26
14	53·20	53·25	53·25	52·92	52·69	52·64	52·62	52·41	52·13	51·93	51·67	51·62	51·75	51·57
15	51·04	50·89	50·48	49·99	49·59	48·42	47·23	45·48	44·97	44·56	43·17	41·51	40·58	40·68
16	41·51	42·35	42·30	41·80	41·92	41·56	40·93	40·68	40·14	39·58	38·75	38·21	37·50	36·67
17	28·46	28·03	27·88	27·70	27·27	27·06	26·66	26·71	26·51	26·61	26·81	26·73	26·81	26·61
18	30·24	30·84	31·33	31·48	31·99	32·52	33·31	34·18	34·63	35·19	35·37	35·85	36·41	36·97
19	40·37	40·37	40·63	40·63	40·53	40·55	40·78	40·85	40·80	40·32	40·17	39·89	39·92	39·89
20	38·49	38·49	38·49	38·31	38·26	38·31	38·19	38·31	38·36	38·44	38·39	38·39	38·34	38·21
21	36·46	36·41	35·87	35·47	35·16	34·91	34·89	34·86	34·55	34·43	34·40	34·40	34·38	34·25
22	31·94	31·35	30·84	30·06	29·37	29·22	28·03	27·22	26·86	26·27	25·56	25·19	24·78	24·52
23	25·59	26·17	26·81	27·52	27·80	28·97	29·52	30·54	31·38	32·16	33·16	33·94	35·21	36·08
24	41·26	40·68	40·68	40·68	40·90	40·75	40·85	40·45	40·63	40·88	41·10	41·08	41·13	41·24
25	41·49	41·72	42·25	42·22	42·86	43·02	43·6-	43·75	44·61	44·94	44·84	44·97	44·86	45·12
26	41·36	41·10	40·60	40·50	39·63	38·82	38·49	38·36	37·89	37·75	37·24	37·32	36·67	36·74
27	37·58	37·89	38·04	38·01	38·01	38·06	38·31	38·39	38·87	38·87	39·07	39·38	39·68	40·37
28	50·33	51·26	52·33	53·10	53·68	54·04	54·82	55·28	55·97	56·32	57·09	57·36	57·56	58·12
29	62·69	63·29	63·49	63·44	63·41	63·46	63·31	63·18	63·13	63·03	62·64	61·99	61·48	60·95
30	54·42	54·70	54·70	55·21	55·77	56·02	56·78	57·90	58·83	59·19	59·60	59·70	60·03	60·87
31	65·52	65·54	65·54	65·21	65·06	64·78	64·32	64·27	63·91	63·76	63·34	63·00	62·69	62·42
Mean -	47·23	47·30	**47·38**	47·28	47·25	47·20	47·20	47·20	47·23	47·20	47·10	47·00	**46·95**	46·98

Fort Rae.

Correction for Gravity +1·17 mm. at 754 mm. Barometer_____m. above sea level. *November* 1882.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
47·28	45·98	44·54	43·47	41·80	40·50	39·00	37·78	36·23	35·67	47·94	56·12	35·67	20·45
31·79	32·70	33·06	33·26	33·67	34·73	36·00	36·92	38·59	40·09	33·08	40·09	30·59	9·50
45·56	45·40	45·17	45·17	44·94	44·71	44·66	44·46	44·44	44·46	44·56	45·93	41·08	4·85
43·22	42·86	43·29	43·04	43·02	43·04	43·24	43·47	43·64	43·67	43·39	44·31	42·86	1·45
43·52	43·59	43·80	44·08	44·05	44·15	44·26	44·34	44·64	45·12	43·83	45·12	43·42	1·70
48·22	48·47	48·65	48·86	48·86	48·96	49·06	49·16	49·21	49·32	47·66	49·32	45·42	3·90
51·96	52·36	52·48	52·84	52·79	53·02	53·07	53·10	53·38	53·55	51·67	53·55	49·52	4·03
48·88	48·17	47·66	46·90	46·47	46·62	46·52	46·72	46·72	47·38	50·43	53·83	46·47	7·36
49·16	49·06	49·29	49·01	49·21	48·88	48·86	48·70	48·50	48·42	49·18	50·38	47·69	2·69
43·75	43·34	42·97	42·58	42·05	41·67	41·46	41·21	40·68	40·43	44·44	48·22	40·43	7·79
37·70	37·48	36·87	36·43	35·65	35·72	35·37	34·78	35·26	35·04	37·91	40·40	34·78	5·62
26·56	25·89	25·21	24·42	23·86	23·25	22·75	22·36	21·78	21·50	**28·23**	34·08	21·50	12·58
39·00	39·68	40·58	40·95	41·08	41·00	41·00	41·34	41·21	40·93	33·11	41·34	**21·35**	19·99
41·24	41·67	42·12	42·63	42·99	43·67	43·70	44·44	44·59	44·81	41·29	44·81	39·07	5·74
41·54	40·63	39·66	39·05	37·78	36·23	35·45	33·62	32·45	31·61	41·16	45·17	31·61	13·56
27·39	27·88	28·30	28·61	28·91	29·57	30·29	30·89	31·59	32·35	28·43	32·35	25·86	6·49
38·65	38·49	38·04	37·48	36·84	36·59	35·97	35·67	35·40	34·84	37·12	39·73	33·13	6·60
32·62	32·27	32·30	31·94	31·40	31·18	30·69	30·32	30·34	30·13	32·75	34·75	30·13	4·62
34·13	34·70	35·70	36·26	37·09	37·94	38·67	39·48	40·14	40·95	33·69	40·95	29·83	11·12
47·66	47·86	47·94	48·15	48·27	48·07	48·25	48·22	48·37	48·47	46·37	48·47	41·70	6·77
46·11	46·29	46·24	46·52	46·54	46·62	46·64	46·75	46·67	46·78	46·69	48·32	45·78	2·54
45·12	45·02	44·84	44·71	44·34	44·00	43·90	43·62	43·70	43·75	45·40	46·78	43·62	3·16
44·29	44·08	44·21	44·36	44·46	44·41	44·39	44·51	44·76	44·91	44·10	44·91	43·52	1·39
46·64	46·90	47·08	47·05	47·18	47·18	47·18	47·38	47·69	47·89	46·32	47·89	44·97	2·92
48·47	48·47	48·30	48·05	47·94	47·86	47·96	48·20	47·74	47·69	48·15	48·47	47·69	0·78
49·54	49·99	50·64	50·99	51·35	51·72	51·96	52·26	53·02	53·23	49·47	53·23	47·40	5·83
55·51	55·33	55·64	55·00	54·80	54·70	54·67	54·09	53·68	53·04	54·80	55·72	53·04	2·68
39·51	38·75	38·31	37·63	37·17	37·14	37·19	37·63	38·11	39·07	43·32	52·74	37·14	15·60
49·34	49·92	50·69	50·84	51·77	52·41	52·94	53·55	54·45	55·36	47·71	55·36	39·56	15·80
59·45	59·45	59·39	59·22	59·29	59·24	59·14	59·07	58·94	58·86	**58·68**	**59·50**	55·97	3·53
43·47	43·42	43·42	43·32	43·19	43·17	**43·14**	**43·14**	43·19	43·32	43·37	46·73	39·69	7·04

Long.—115° 43′ 50″ = —7h. 42m. 55s.

December 1882.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
57·46	57·80	57·85	58·00	57·97	57·82	58·33	58·38	58·56	58·48	58·05	58·83	57·46	1·37
51·98	51·26	50·76	49·92	49·18	48·72	48·27	48·25	48·25	48·05	53·65	59·07	48·05	11·02
50·10	50·28	50·61	50·53	50·86	50·79	50·94	51·11	50·99	51·01	49·64	51·11	47·94	3·17
48·40	48·50	48·45	48·88	49·26	50·35	50·94	51·80	52·97	54·09	49·94	54·09	48·40	5·69
65·13	65·47	65·49	65·57	65·62	65·47	65·18	65·34	65·34	65·29	**62·80**	65·62	55·21	10·41
56·24	55·23	54·75	53·83	53·04	52·21	51·45	50·96	50·13	49·37	57·61	65·13	49·37	15·76
39·92	39·78	39·53	38·92	38·56	37·78	37·60	37·43	37·38	37·53	41·77	48·67	37·38	11·29
40·17	40·53	40·93	41·29	41·49	41·77	42·05	42·22	42·61	43·19	39·58	43·19	37·22	5·97
47·59	48·30	48·67	48·93	49·44	49·89	50·33	50·66	51·26	51·75	46·93	51·75	43·22	8·53
53·89	53·94	53·91	54·14	54·40	54·75	54·97	55·26	55·56	55·67	53·80	55·67	52·11	3·56
59·85	60·03	60·05	60·18	59·98	60·00	60·05	60·05	60·29	60·26	58·91	60·29	55·99	4·30
59·34	59·14	59·02	58·71	58·63	58·38	58·12	58·12	57·97	57·75	59·29	60·36	57·75	2·61
54·37	54·26	54·16	53·96	53·86	53·63	53·50	53·45	53·55	53·43	55·13	57·56	53·43	4·13
50·91	50·76	51·14	50·74	50·40	50·99	51·42	51·29	51·14	51·29	51·83	53·25	50·40	2·85
40·19	40·17	40·17	40·50	40·53	40·50	40·60	40·90	41·56	41·97	43·98	51·04	40·17	10·87
35·57	34·33	33·41	34·13	33·11	31·61	30·94	29·93	29·45	28·76	36·89	42·35	28·76	13·59
26·71	26·91	27·06	27·62	27·83	27·85	28·23	28·66	29·27	29·73	27·49	29·73	26·51	3·22
37·50	37·86	38·29	38·65	38·90	39·16	39·31	39·68	40·07	40·27	35·82	40·27	30·24	10·03
39·61	39·43	39·16	38·92	38·90	38·49	38·41	38·65	38·62	38·56	39·76	40·85	38·41	2·44
38·24	38·39	38·29	38·11	38·11	38·14	37·75	37·60	37·14	36·99	38·16	38·49	36·99	1·50
34·65	34·45	34·30	34·15	33·89	33·74	33·57	33·16	32·75	32·40	34·48	36·46	32·40	4·06
24·27	24·07	24·19	24·32	24·27	24·32	24·37	24·42	24·80	25·19	**26·48**	31·94	**24·07**	7·87
36·94	37·29	38·09	38·54	39·33	39·53	39·97	39·66	40·40	40·80	33·97	40·80	25·59	15·21
41·26	41·51	41·36	41·31	41·08	41·03	41·34	41·54	41·29	41·41	41·05	41·54	40·45	1·09
45·56	45·10	45·02	44·97	43·90	43·73	43·73	43·27	43·19	42·32	43·80	45·56	41·49	4·07
36·82	36·99	37·09	37·02	37·40	37·91	38·14	38·29	38·19	37·73	38·26	41·36	36·67	4·69
41·31	42·17	43·24	43·98	45·02	46·32	47·25	47·96	48·55	49·39	41·49	49·39	37·58	11·81
58·66	59·02	59·48	59·85	60·08	60·77	61·05	61·58	61·96	62·24	57·16	62·24	50·33	11·91
60·56	59·80	59·09	58·31	57·31	56·50	55·89	54·87	54·87	54·60	60·46	63·49	54·60	8·89
62·17	63·23	64·12	64·76	65·13	65·34	65·77	65·90	65·85	65·85	60·49	**65·90**	54·42	11·48
61·99	61·71	61·25	60·90	60·31	59·75	59·22	58·88	58·71	58·33	62·52	65·54	58·33	7·21
47·00	47·03	47·05	47·08	47·03	47·00	47·05	47·08	47·18	47·20	47·13	50·69	43·58	7·11

Atmospheric Pressure.

January 1883. 700 mm. + Mean time of place.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	58·28	58·26	58·00	57·75	57·82	57·72	57·72	57·41	57·44	57·54	57·61	57·21	57·14	57·39
2	59·07	59·37	59·60	59·75	59·45	59·48	59·88	60·08	60·13	60·00	59·95	60·10	60·36	60·24
3	60·41	60·41	60·49	60·26	60·00	59·65	59·60	59·60	59·53	59·60	59·22	58·94	58·78	58·73
4	57·56	57·49	57·59	57·31	57·01	56·94	56·68	56·73	56·45	56·34	56·22	55·64	55·53	55·46
5	52·53	52·31	52·18	51·98	51·55	51·24	51·37	51·21	51·32	51·42	51·26	50·86	50·66	50·66
6	49·32	49·39	49·44	49·06	48·78	48·45	47·94	47·86.	47·56	47·23	47·08	46·54	46·16	45·91
7	44·74	45·12	45·53	45·27	45·40	45·35	45·02	45·15	45·30	45·58	45·56	45·51	45·30	45·05
8	39·31	38·90	38·29	37·55	36·64	36·38	35·70	35·42	35·29	35·32	35·09	34·73	33·92	33·64
9	35·80	36·72	37·78	38·70	39·73	40·53	41·80	42·91	43·83	44·89	45·88	46·54	47·30	48·10
10	50·96	51·35	51·50	51·55	51·47	51·45	51·19	51·09	51·21	50·81	51·14	50·99	51·19	51·40
11	50·40	50·35	49·89	49·77	49·64	49·69	49·74	49·87	49·92	50·05	50·35	50·25	50·76	50·64
12	51·96	52·06	51·75	51·37	51·01	50·79	50·40	50·23	50·20	49·79	49·26	48·86	48·25	47·86
13	43·83	43·73	43·47	43·34	43·22	42·99	42·94	42·97	43·12	43·04	43·19	43·19	42·99	43·17
14	45·30	45·71	45·71	45·58	45·51	45·35	45·48	45·73	45·86	45·63	45·76	45·61	45·45	45·35
15	47·23	47·69	48·35	48·50	48·96	49·77	50·25	51·35	52·56	53·55	54·31	54·60	55·56	56·45
16	60·49	60·77	60·87	61·00	61·05	60·95	60·77	60·72	60·41	60·51	60·54	60·51	60·49	60·56
17	58·48	58·51	58·31	58·07	58·05	58·23	58·10	58·53	58·94	59·22	59·68	59·75	60·77	61·10
18	66·23	66·81	67·07	66·96	66·81	66·74	66·00	65·77	65·13	64·35	63·89	63·13	61·96	60·61
19	50·66	49·87	49·62	49·32	49·08	49·26	49·21	49·44	49·67	49·97	50·10	49·77	49·54	49·77
20	53·50	53·58	53·63	53·78	53·80	53·86	54·55	54·72	54·80	54·92	55·10	55·16	54·95	55·05
21	55·56	55·53	55·87	56·04	55·84	55·69	55·41	55·48	55·51	55·72	56·12	55·94	55·99	56·07
22	58·10	58·12	58·28	58·36	58·53	58·41	57·61	57·85	58·26	58·38	58·10	57·85	57·72	57·70
23	58·73	58·94	59·07	59·39	59·83	60·31	60·66	60·95	60·80	61·63	62·04	62·27	61·86	62·32
24	57·31	56·29	55·89	55·05	53·68	52·79	51·45	50·79	49·26	48·25	46·83	45·68	44·54	42·58
25	33·31	33·23	33·13	33·08	33·13	33·23	33·21	33·41	33·82	34·40	34·81	34·99	35·11	35·70
26	38·29	38·56	38·49	38·49	38·65	38·70	39·21	39·53	39·83	40·14	40·50	40·65	40·73	40·88
27	40·48	40·22	40·24	39·73	39·51	39·10	38·92	38·82	38·77	38·39	38·31	38·16	38·21	38·19
28	40·78	41·29	41·92	42·20	42·40	42·61	42·68	42·93	43·32	43·73	43·88	43·80	43·83	43·98
29	46·67	47·13	47·28	47·89	48·20	48·50	49·01	49·72	50·35	50·94	51·45	51·86	52·18	52·72
30	56·73	57·06	57·51	57·87	58·02	58·26	58·43	58·66	58·88	59·14	59·24	59·53	59·83	60·08
31	62·67	62·85	63·39	64·10	64·30	64·66	64·66	64·88	65·42	65·95	66·38	66·50	66·99	67·35
Mean -	**51·11**	51·21	51·29	51·26	51·19	51·19	51·14	51·29	51·40	51·50	**51·57**	51·45	51·42	51·45

February 1883. Lat. + 62° 38′ 52″.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	70·67	70·60	70·37	70·09	69·69	69·43	69·28	68·77	68·23	67·67	67·01	66·33	65·52	64·71
2	58·81	58·53	58·53	58·58	59·24	59·65	60·21	60·66	61·25	61·63	62·22	62·22	62·57	62·14
3	51·67	51·62	52·03	52·64	53·65	54·26	55·05	55·87	56·88	57·56	57·87	57·82	57·70	57·67
4	49·23	48·15	47·25	45·93	44·54	43·12	41·87	40·85	40·12	39·43	39·26	39·21	39·41	39·51
5	44·15	44·97	45·22	45·96	45·98	46·11	46·37	46·24	46·08	45·61	45·53	45·10	44·69	44·91
6	49·94	50·23	50·23	50·25	50·10	50·05	49·39	48·70	48·12	47·45	46·75	44·94	43·85	42·88
7	35·37	35·85	38·11	39·89	41·61	43·49	44·94	46·21	48·05	48·72	50·08	51·37	52·03	52·74
8	49·92	49·54	48·93	48·12	47·76	47·25	46·67	46·49	46·93	46·72	47·43	47·69	47·69	48·12
9	51·32	51·09	50·59	50·13	49·26	47·76	46·54	45·20	43·85	42·48	41·08	39·92	39·00	38·06
10	41·82	41·82	41·75	41·44	40·70	39·81	38·87	38·46	38·31	38·39	38·24	37·78	37·40	37·27
11	41·82	42·73	43·93	44·66	45·51	45·61	46·06	46·13	46·32	46·67	47·05	47·28	47·43	47·33
12	50·38	50·76	51·32	51·60	52·01	52·51	52·72	52·99	53·38	53·86	54·19	54·55	54·92	55·00
13	54·95	54·82	54·52	54·21	53·80	53·45	52·92	52·62	52·59	52·16	51·88	51·60	51·19	50·45
14	46·16	45·53	45·37	45·10	44·69	44·39	44·15	43·83	43·75	43·52	43·24	43·17	42·81	42·61
15	43·49	43·83	44·00	44·18	44·54	44·91	45·30	45·86	46·27	46·72	47·33	47·89	48·50	48·86
16	54·42	54·62	54·40	54·52	54·70	54·77	54·97	55·02	54·80	54·72	54·87	54·50	54·16	53·78
17	51·37	50·84	50·40	49·97	49·72	49·59	49·32	49·16	49·16	49·03	49·11	49·16	49·77	50·10
18	56·40	56·58	56·63	56·50	56·58	56·53	55·89	55·41	54·95	54·37	54·52	54·47	54·40	54·21
19	53·38	53·91	53·80	53·91	54·16	54·31	54·40	54·57	54·65	54·85	55·10	55·07	55·02	54·85
20	52·11	51·75	51·47	51·06	50·33	49·62	49·23	48·37	47·96	47·89	48·10	47·69	47·15	46·52
21	47·23	47·48	47·04	47·61	47·35	46·78	46·54	46·59	46·32	46·24	45·71	45·12	44·79	44·51
22	38·59	38·82	38·44	38·62	38·67	38·65	39·13	39·58	40·02	40·50	41·00	41·21	41·70	42·07
23	46·47	46·64	46·75	46·93	47·13	47·33	47·40	47·81	48·17	48·25	48·60	48·70	48·52	48·57
24	48·25	48·50	48·50	48·62	48·91	49·16	49·47	49·72	49·97	50·53	51·24	51·52	51·65	51·91
25	54·29	54·09	53·96	54·04	54·14	54·24	54·26	54·50	54·37	54·24	53·96	53·99	53·99	53·89
26	50·48	50·61	50·50	50·33	50·20	50·28	50·10	50·28	50·20	50·56	50·50	50·89	51·26	51·77
27	55·89	56·02	55·53	56·04	55·92	55·48	55·02	54·97	55·23	54·92	54·60	54·14	53·75	53·38
28	51·14	50·99	50·81	50·81	50·91	51·19	51·19	51·24	51·40	51·45	51·83	51·98	52·18	52·51
Mean -	49·99	50·02	50·02	**50·08**	**50·08**	49·99	49·89	49·87	49·89	49·87	49·94	49·82	49·74	49·67

Fort Rae.

Correction for Gravity +1·17 mm. at 754 mm. Barometer _____ m. above sea level. *January* 1883.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
57·29	57·46	56·88	57·14	56·94	57·24	57·51	57·92	58·21	58·66	57·61	58·66	56·88	1·78
60·44	60·69	60·69	60·59	60·64	60·75	60·61	60·64	60·36	60·36	60·13	60·75	59·07	1·68
58·73	58·48	58·51	58·18	57·77	57·82	57·85	57·82	57·64	57·51	58·99	60·49	57·51	2·98
55·36	54·82	54·57	54·06	53·58	53·38	53·15	53·13	52·74	52·46	55·43	57·59	52·46	5·13
50·53	50·28	50·33	50·23	49·89	49·84	49·92	49·67	49·47	49·32	50·84	52·53	49·32	3·21
45·81	45·61	45·51	45·32	45·20	45·00	44·97	44·89	44·71	44·64	46·78	49·44	44·64	4·80
44·97	45·00	44·18	43·67	43·09	42·27	41·46	40·93	40·17	39·51	44·13	45·58	39·51	6·07
33·48	33·33	32·96	32·91	33·01	33·01	33·48	34·15	34·45	34·86	35·09	39·31	**32·91**	6·40
48·37	48·88	49·37	49·54	49·72	50·13	50·10	50·40	50·76	50·94	45·37	50·94	35·80	15·14
51·14	50·86	50·71	50·53	50·20	49·92	50·08	50·20	50·45	50·33	50·91	51·55	49·92	1·63
50·89	51·35	51·40	51·57	51·55	51·70	51·86	52·03	52·18	52·06	50·74	52·18	49·64	2·54
47·25	46·95	46·95	46·47	45·83	45·71	44·94	44·81	44·56	44·13	48·40	52·06	44·13	7·93
43·42	43·70	43·85	44·21	44·26	44·29	44·41	44·64	44·74	45·22	43·67	45·22	42·94	2·28
45·45	45·45	45·42	45·58	45·96	45·81	45·73	46·01	46·64	47·03	45·71	47·03	45·30	1·73
57·39	58·10	59·14	59·78	59·90	60·26	60·44	60·46	60·51	60·41	54·82	60·51	47·23	13·28
60·64	60·49	60·56	60·39	60·21	59·75	59·42	59·32	59·12	58·86	60·36	61·05	58·86	2·19
61·83	62·62	63·31	63·84	64·45	65·23	65·88	65·88	65·93	66·03	61·27	66·03	58·05	7·98
60·36	59·24	58·51	57·80	56·17	55·10	53·70	53·23	51·77	50·81	61·17	67·07	50·81	16·26
49·87	50·45	51·04	51·45	51·91	52·13	52·31	52·48	52·77	52·36	50·50	52·77	49·08	3·69
55·16	55·46	55·48	55·18	55·21	55·10	55·41	55·74	55·23	55·58	54·80	55·74	53·50	2·24
56·32	56·60	56·83	57·06	57·01	57·09	57·36	57·49	57·77	57·64	56·32	57·77	55·41	2·36
57·77	57·70	57·34	57·41	57·16	57·16	57·49	57·64	57·56	58·07	57·85	58·53	57·16	1·37
61·96	61·96	61·58	61·02	60·39	59·88	59·58	59·29	58·68	57·92	60·46	62·32	57·92	4·40
41·49	40·14	39·02	37·80	36·31	35·42	34·55	33·97	33·57	33·46	44·84	57·31	33·46	23·85
35·70	35·62	35·82	36·18	36·23	36·33	36·48	36·77	37·22	37·40	**34·94**	37·40	33·08	4·32
40·90	41·36	41·26	41·19	41·29	41·24	41·26	41·21	40·78	40·63	40·17	41·36	38·29	3·07
38·09	38·39	38·54	38·41	38·65	38·87	39·23	39·48	39·99	40·27	39·05	40·48	38·09	2·39
44·05	44·29	44·56	44·49	44·64	44·86	45·20	45·51	45·93	46·42	43·73	46·42	40·78	5·64
53·23	53·89	54·19	54·57	54·80	55·02	55·48	55·87	56·19	56·43	51·83	56·43	46·67	9·76
60·26	60·66	60·85	61·07	61·20	61·42	61·76	61·83	62·17	62·32	59·70	62·32	56·73	5·59
67·88	68·31	68·94	69·38	69·79	69·94	70·26	70·21	70·57	70·65	**66·91**	**70·65**	62·67	7·98
51·50	51·55	51·55	51·52	51·40	51·35	51·35	51·40	51·40	51·37	51·37	54·11	48·32	5·79

Long.—115° 43′ 50″= — 7h. 42m. 55s.

February 1883.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
64·07	63·31	62·57	61·86	61·25	60·95	60·31	59·85	59·14	59·12	**65·44**	**70·67**	59·12	11·55
62·14	61·99	61·32	60·92	59·50	58·23	56·70	55·43	53·99	52·36	59·53	62·57	52·36	10·21
57·41	56·94	56·40	55·53	55·10	54·29	53·25	52·13	51·26	50·23	54·80	57·87	50·23	7·64
39·83	40·65	40·90	41·54	41·72	41·51	41·92	42·68	43·34	43.70	42·32	49·23	39·21	10·02
44·84	44·64	44·84	45·93	47·54	47·94	48·91	49·39	49·77	49·89	46·27	49·89	44·15	5·74
41·03	39·99	39·58	38·92	38·09	37·02	36·16	35·52	35·06	34·86	43·73	50·25	**34·86**	15·39
52·94	53·23	53·25	53·35	53·35	53·02	52·82	52·16	51·35	50·91	48·12	53·35	35·37	17·98
48·42	48·98	49·44	49·29	49·39	49·64	50·15	50·64	50·96	51·14	48·62	51·14	46·49	4·65
37·60	38·21	38·87	39·23	39·97	40·53	41·03	41·59	41·90	41·70	43·22	51·32	37·60	13·72
36·97	37·60	37·94	38·95	39·63	40·43	40·93	41·39	41·72	41·87	**39·56**	41·87	36·97	4·90
47·59	48·05	48·17	48·50	48·60	48·91	49·06	49·47	49·72	49·87	46·93	49·87	41·82	8·05
54·92	55·16	54·87	54·92	54·67	54·82	54·82	55·26	55·31	54·92	53·75	55·31	50·38	4·93
49·92	49·54	48·81	48·70	48·70	48·42	48·07	47·48	47·03	46·49	51·01	54·95	46·49	8·46
42·48	42·46	42·73	42·76	42·53	42·73	42·51	42·58	42·73	43·24	43·54	46·16	42·46	3·70
49·42	50·15	50·61	50·94	51·50	51·52	52·31	52·77	53·35	53·78	48·25	53·78	43·49	10·29
53·60	53·23	53·02	52·84	52·72	52·48	52·51	52·31	51·98	51·65	53·78	55·02	51·65	3·37
50·76	51·21	52·16	52·82	53·40	53·60	54·14	54·97	55·67	56·09	51·32	56·09	49·03	7·06
53·83	53·30	53·13	53·04	52·77	52·46	52·53	52·56	52·56	52·99	54·45	56·63	52·46	4·17
54·85	54·87	54·57	54·42	54·11	53·55	53·60	53·15	52·56	52·36	54·16	55·10	52·36	2·74
46·49	46·52	46·37	46·83	46·64	46·72	46·64	46·78	46·98	47·05	48·17	52·11	46·37	5·74
43·98	43·12	42·35	41·92	41·31	40·95	40·55	39·86	39·36	39·13	44·26	47·64	39·13	8·51
42·40	42·88	43·47	43·83	44·34	44·56	44·97	45·48	45·56	46·03	41·70	46·03	38·44	7·59
48·67	48·65	48·70	48·75	48·62	48·42	48·32	48·10	48·30	48·22	47·99	48·75	46·47	2·28
52·28	52·48	52·77	52·99	53·58	53·43	53·60	53·80	54·11	54·11	51·29	54·11	48·25	5·86
53·53	53·38	53·04	52·59	52·62	52·03	51·98	52·03	51·37	51·09	53·40	54·50	51·09	3·41
52·03	52·72	52·99	53·83	54·14	54·37	54·77	54·92	55·18	55·79	52·03	55·79	50·10	5·69
53·04	52·82	52·72	52·28	51·98	51·83	51·60	51·47	51·45	51·37	53·80	56·04	51·37	4·67
52·67	52·94	53·30	53·58	54·29	54·34	54·62	54·62	54·75	54·65	52·48	54·75	50·81	3·94
49·57	49·62	49·59	49·69	49·72	49·59	49·59	49·59	49·52	**49·44**	49·79	53·24	46·02	7·22

Atmospheric Pressure.

March 1883. 700 mm. + Mean time of place

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	54·57	54·26	54·42	54·34	53·99	53·78	53·50	53·43	53·07	52·69	52·33	52·28	52·11	51·88
2	54·37	55·00	55·58	56·37	56·96	57·75	58·46	59·02	59·70	60·69	61·25	61·86	62·75	63·86
3	67·37	67·40	67·52	67·83	68·01	68·21	68·39	68·57	68·44	68·69	68·64	68·47	68·13	68·18
4	64·71	63·96	63·66	63·23	62·78	61·91	61·25	60·90	60·41	60·00	59·73	59·34	58·94	58·41
5	56·83	57·09	57·21	57·26	57·31	57·51	57·56	57·87	58·15	58·15	58·56	58·66	58·78	58·63
6	55·33	54·65	53·99	53·15	52·28	51·57	50·48	49·39	48·37	47·71	46·64	45·96	45·22	44·24
7	40·45	40·50	40·48	40·50	40·53	40·60	40·53	40·22	40·02	39·71	39·10	38·56	38·04	37·12
8	31·08	31·30	31·81	32·91	33·57	34·53	35·45	36·31	37·17	38·34	38·95	40·22	41·16	42·00
9	46·13	46·34	46·13	46·54	46·72	47·20	47·54	47·96	48·10	48·45	48·57	49·11	49·44	49·57
10	51·16	50·96	50·71	50·64	50·50	49·79	49·39	49·13	48·60	48·20	47·54	47·10	46·44	46·13
11	43·37	44·36	45·00	45·48	46·11	46·85	46·88	47·33	47·76	48·10	48·72	49·23	49·39	49·57
12	47·25	46·67	46·29	44·74	44·15	43·57	42·73	41·87	41·00	39·41	39·43	38·49	38·06	37·35
13	37·68	38·26	39·05	40·27	40·90	41·61	42·43	42·99	43·83	44·29	44·54	44·84	45·42	45·58
14	55·69	56·65	57·26	58·05	58·66	59·09	59·48	59·70	59·58	59·65	59·53	58·99	58·56	57·82
15	49·37	49·06	48·88	48·55	48·55	48·81	49·03	49·06	49·54	49·87	50·40	50·35	50·86	50·99
16	47·18	47·10	46·83	46·88	46·90	46·93	46·90	46·95	47·00	47·40	47·56	48·10	48·65	48·98
17	51·60	51·80	51·98	52·11	52·62	53·23	53·33	53·45	54·14	54·40	54·75	55·13	55·21	55·07
18	53·68	53·55	53·18	52·62	52·06	51·93	52·16	51·83	51·50	51·26	51·14	50·38	49·89	49·94
19	44·66	44·15	43·57	42·88	42·56	41·80	41·59	41·61	41·67	41·80	41·72	42·15	42·12	41·97
20	41·67	41·61	41·85	42·27	42·53	42·68	42·78	43·07	43·27	43·70	43·93	44·00	43·83	43·95
21	47·30	47·40	47·43	47·71	47·91	47·79	47·66	47·43	47·79	47·71	47·54	47·25	47·03	46·80
22	43·95	43·78	43·90	43·83	43·90	43·95	44·10	44·34	44·44	44·44	44·69	45·02	45·25	45·61
23	51·77	52·38	53·04	53·63	54·34	55·16	55·38	55·89	56·45	56·85	57·19	57·61	57·90	58·26
24	63·31	63·59	63·84	64·15	64·68	65·08	65·49	65·95	66·18	66·48	66·59	66·74	66·76	66·86
25	66·25	65·93	65·67	65·74	65·52	65·21	64·88	65·01	64·83	64·71	64·47	63·71	63·49	63·03
26	59·37	58·97	58·43	58·76	58·02	57·64	56·83	56·37	56·04	55·56	55·07	54·31	53·89	53·58
27	51·72	51·67	51·72	52·08	52·28	52·64	52·82	53·02	53·25	53·43	53·65	53·55	53·63	53·58
28	52·13	51·96	52·18	52·06	52·11	51·98	51·91	52·08	52·16	52·31	52·31	52·43	52·28	52·03
29	52·51	52·53	52·72	52·74	52·74	52·79	52·84	53·02	53·35	53·30	53·20	53·07	52·92	52·87
30	53·63	53·83	53·78	53·91	54·24	54·40	54·70	54·65	54·87	55·13	55·13	55·10	55·10	55·10
31	55·13	55·23	55·41	55·53	55·56	55·26	55·33	55·28	55·16	55·16	54·85	54·65	54·52	54·26
Mean -	51·32	51·35	51·40	51·50	51·57	51·65	51·67	51·72	51·80	51·86	51·86	51·83	51·80	51·72

April 1883. Lat. + 62° 38′ 52″.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	51·55	51·37	51·06	50·94	50·66	50·30	50·15	50·08	49·82	49·54	49·29	49·11	48·83	48·47
2	46·42	46·37	46·01	45·83	45·61	45·56	45·58	45·30	45·32	45·22	45·02	44·79	44·61	44·46
3	43·29	43·52	43·54	43·85	44·00	44·18	44·54	44·74	44·94	45·12	45·17	45·22	45·61	45·68
4	49·26	49·37	49·69	49·89	50·10	50·25	50·23	50·15	49·97	49·69	49·52	49·21	48·98	48·55
5	44·84	44·49	43·95	43·78	43·75	43·34	43·19	42·73	42·46	42·07	41·70	41·36	41·03	40·83
6	40·09	40·09	40·32	40·53	40·78	41·16	41·36	41·61	41·67	41·95	42·00	42·07	42·05	41·97
7	40·12	39·86	39·73	39·38	39·26	38·82	38·72	38·46	38·49	38·26	38·11	37·83	37·75	37·78
8	39·86	40·04	40·17	40·37	40·78	40·98	41·44	41·46	41·49	41·77	41·70	41·54	41·61	41·41
9	38·95	38·59	38·21	37·63	37·07	37·14	36·77	36·48	36·53	36·67	36·67	36·59	36·51	36·53
10	37·19	37·09	36·94	36·97	36·94	36·77	36·48	36·26	36·16	36·05	35·75	35·55	35·35	35·06
11	31·94	31·71	31·18	31·00	31·05	30·84	30·72	30·84	30·89	30·89	30·77	30·77	30·77	30·79
12	32·70	33·01	33·33	33·82	34·38	34·94	35·65	35·85	36·02	36·38	36·79	37·29	37·60	37·86
13	41·87	42·15	42·56	42·99	43·27	43·73	43·70	44·15	44·36	44·66	45·07	45·35	45·63	45·81
14	50·13	50·35	50·56	50·71	51·52	51·91	51·96	52·08	52·13	52·33	52·38	52·28	52·23	52·03
15	50·08	49·62	49·49	49·34	49·06	49·29	49·34	48·60	48·30	47·99	47·69	47·40	47·25	46·88
16	45·91	46·06	46·24	46·27	46·62	46·64	46·83	46·49	46·52	46·52	46·59	46·49	46·32	46·18
17	46·62	46·78	46·75	46·83	47·10	46·90	46·95	46·98	47·00	46·85	46·90	46·93	46·88	46·95
18	47·59	47·74	47·89	47·94	47·96	48·05	48·02	48·20	48·25	48·20	48·02	47·94	47·86	47·69
19	45·10	44·74	44·49	44·34	43·98	43·75	43·34	42·88	42·63	42·27	41·87	41·44	41·13	40·80
20	38·56	38·46	38·14	38·21	37·99	37·70	37·63	37·55	37·24	37·27	36·99	36·48	36·18	35·77
21	33·16	33·08	32·88	32·91	32·86	32·65	32·96	32·98	32·96	33·03	32·96	32·75	32·91	32·93
22	34·81	35·06	36·13	36·69	37·70	38·65	39·73	40·93	42·22	43·22	44·24	45·40	46·57	47·76
23	57·72	58·56	59·22	59·93	60·34	61·00	61·71	62·09	62·37	62·64	62·85	62·80	62·59	62·39
24	59·53	58·94	58·53	57·82	57·44	56·96	56·43	56·04	55·58	54·92	54·01	53·38	52·67	51·96
25	45·12	45·02	44·71	44·76	44·39	44·13	43·75	43·64	43·17	42·81	42·22	41·64	41·10	40·90
26	38·19	38·62	38·75	39·18	40·24	40·85	41·80	42·53	43·24	43·88	44·69	45·42	46·16	46·80
27	51·50	51·72	52·41	52·92	53·20	53·53	54·01	54·21	54·34	54·45	54·60	54·77	54·82	54·65
28	53·83	53·78	53·80	53·68	53·38	53·45	53·23	52·99	52·99	53·18	53·10	53·18	52·99	52·92
29	53·15	53·18	53·07	53·25	53·48	53·80	54·09	54·31	54·60	54·75	54·85	55·13	55·31	55·41
30	56·78	56·70	56·70	56·91	57·11	57·09	57·16	57·16	57·06	57·11	56·99	56·91	56·75	56·55
Mean -	44·86	44·86	44·89	44·94	45·07	45·15	45·25	45·27	45·30	45·32	45·27	45·22	45·20	45·12

Fort Rae.

Correction for gravity +1·17 mm. at 754 mm. Barometer_____m. above sea level. *March* 1883.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
52·01	51·77	51·96	52·06	52·03	52·21	52·13	52·46	53·07	53·86	52·92	54·57	51·77	2·80
64·20	64·50	64·93	65·11	65·69	65·98	66·40	66·61	66·91	67·04	61·71	67·04	54·37	12·67
67·77	67·37	67·10	66·89	66·81	66·81	66·56	66·10	65·42	65·06	**67·50**	**68·69**	65·06	3·63
57·80	57·56	57·14	56·78	56·58	56·80	56·63	56·73	57·01	56·78	59·55	64·71	56·58	8·13
58·53	58·58	58·31	57·92	57·97	57·80	57·46	56·80	56·24	55·82	57·72	58·78	55·82	2·96
43·52	42·68	42·63	42·20	41·80	41·46	41·05	40·73	40·63	40·43	46·49	55·33	40·43	14·90
36·23	35·57	34·65	33·97	33·33	32·35	31·35	30·84	30·72	30·79	**36·92**	40·60	**30·72**	9·88
42·66	43·44	44·10	44·64	44·97	45·12	45·25	45·51	45·76	45·78	39·66	45·78	31·08	14·70
49·84	49·94	50·53	50·79	51·11	51·19	51·16	51·35	51·04	51·04	48·98	51·35	46·13	5·22
45·42	44·94	44·54	43·52	43·52	42·66	42·46	42·78	42·76	43·24	46·75	51·16	42·46	8·70
49·79	49·82	49·34	49·03	49·01	48·86	48·67	48·30	47·84	47·91	47·79	49·82	43·37	6·45
36·89	36·84	36·46	36·13	35·97	36·48	36·23	36·56	36·77	37·09	39·86	47·25	35·97	11·28
45·88	47·30	48·35	49·52	50·71	51·70	52·53	53·50	54·55	55·18	45·88	55·18	37·68	17·50
56·99	56·09	55·23	54·21	53·89	53·23	52·64	51·86	50·74	50·10	56·40	59·70	50·10	9·60
51·04	50·96	50·81	50·15	49·99	49·62	49·23	48·78	48·15	47·64	49·57	51·04	47·64	3·40
48·91	49·03	49·47	50·25	49·84	50·13	50·13	50·59	51·42	51·37	48·52	51·42	46·83	4·59
54·82	54·97	54·85	54·47	54·52	54·42	54·06	53·75	53·58	53·28	53·80	55·21	51·60	3·61
49·52	49·29	48·72	48·22	47·81	47·20	46·75	46·08	45·27	45·07	49·97	53·68	45·07	8·61
41·97	42·10	42·40	42·25	41·95	42·02	41·90	41·49	41·36	41·36	42·20	44·66	41·36	3·30
43·85	44·41	44·76	45·00	45·63	46·11	46·49	46·88	47·13	47·05	44·10	47·13	41·61	5·52
46·64	46·42	45·96	45·61	45·37	45·12	44·79	44·51	44·31	44·10	46·57	47·91	44·10	3·81
45·98	46·27	46·95	47·66	48·17	48·75	49·44	50·02	50·76	51·35	46·11	51·35	43·78	7·57
58·61	59·19	59·53	60·03	60·41	61·05	61·40	61·93	62·39	62·83	57·64	62·83	51·77	11·06
66·79	66·43	66·48	66·45	66·61	66·61	66·50	66·45	66·40	66·43	65·88	66·86	63·31	3·55
62·37	62·04	61·68	61·53	61·37	61·15	60·82	60·31	60·24	59·80	63·34	66·25	59·80	6·45
53·07	52·51	51·91	51·65	51·52	51·57	51·72	51·72	51·67	51·77	54·67	59·37	51·52	7·85
53·38	53·15	53·10	52·79	52·79	52·59	52·53	52·38	52·18	52·13	52·77	53·65	51·67	1·98
51·96	51·77	51·77	51·62	51·62	51·88	51·86	52·06	52·23	52·33	52·06	52·43	51·62	0·81
52·79	52·62	52·69	52·59	52·69	52·89	52·99	53·23	53·28	53·35	52·89	53·35	52·51	0·84
55·13	54·82	54·80	54·75	54·92	55·10	55·07	55·05	55·13	55·21	54·72	55·21	53·63	1·58
53·94	53·65	53·23	52·87	52·64	52·43	52·38	52·13	52·13	51·88	54·11	55·56	51·88	3·68
51·55	51·50	51·42	51·32	51·35	51·35	51·24	51·21	**51·19**	**51·19**	51·52	54·77	48·10	6·67

Long.—115° 43′ 50″ = − 7h. 42m. 55s.

April 1883.

3	4	5	6	7	8	9	10	1	12	Means.	Maximum.	Minimum.	Difference.
48·15	47·99	47·74	47·25	47·10	46·98	46·90	46·78	46·64	46·67	48·88	51·55	46·64	4·91
44·31	44·13	43·95	43·67	43·70	43·75	43·59	43·42	43·22	43·17	44·71	46·42	43·17	3·25
45·98	46·16	46·59	46·90	47·20	47·48	47·91	48·15	48·50	48·78	45·71	48·78	43·29	5·49
48·27	47·86	47·38	46·85	46·57	46·32	46·13	45·76	45·42	45·22	48·37	50·25	45·22	5·03
40·48	40·29	40·09	39·76	39·71	39·61	39·71	39·86	39·94	40·07	41·61	44·84	39·61	5·23
41·82	41·51	41·39	41·10	40·75	40·43	40·34	40·17	40·27	40·27	41·08	42·07	40·09	1·98
37·75	37·73	37·78	37·94	38·14	38·34	38·56	38·95	39·28	39·48	38·62	40·12	37·73	2·39
41·26	41·16	41·16	40·85	40·48	40·24	40·32	40·04	39·76	39·36	40·80	41·77	39·36	2·41
36·53	36·51	36·67	36·64	36·74	37·02	37·14	37·17	37·14	37·24	37·04	38·95	36·48	2·47
34·65	34·53	34·45	34·13	33·82	33·51	33·28	33·11	32·65	32·32	35·21	37·19	32·32	4·87
30·77	30·79	30·92	31·10	31·28	31·48	31·64	31·96	31·99	32·35	**31·18**	32·35	**30·72**	1·63
38·24	38·62	38·87	39·21	39·61	40·04	40·43	40·90	41·16	41·44	37·24	41·44	32·70	8·74
45·93	46·29	46·47	46·90	47·28	47·71	48·40	48·81	49·52	49·94	45·53	49·94	41·87	8·07
51·72	51·47	51·29	51·11	51·06	50·81	50·76	50·74	50·33	50·33	51·35	52·38	50·13	2·25
46·34	46·24	46·18	46·21	46·08	46·06	45·83	45·63	45·88	45·81	47·54	50·08	45·63	4·45
46·03	45·96	45·81	45·66	45·68	45·83	45·96	45·93	46·32	46·57	46·24	46·83	45·66	1·17
47·05	47·03	46·85	46·95	47·08	47·18	47·33	47·40	47·38	47·43	47·00	47·43	46·62	0·81
47·56	47·35	47·08	46·67	46·37	46·24	46·13	45·76	45·45	45·30	47·30	48·25	45·30	2·95
40·50	40·22	39·73	39·41	39·23	39·10	38·90	38·97	38·72	38·67	41·51	45·10	38·67	6·43
35·47	35·21	35·11	35·01	34·73	34·68	34·33	34·05	33·54	33·28	36·23	38·56	33·28	5·28
32·93	32·93	32·83	32·93	33·31	33·48	33·62	33·69	34·08	34·40	33·13	34·40	32·65	1·75
48·67	50·05	51·06	52·11	52·87	53·63	54·31	55·36	56·32	57·04	45·86	57·04	34·81	22·23
62·22	61·88	61·61	61·37	61·40	61·51	61·35	60·85	60·54	60·10	**61·20**	**62·85**	57·72	5·13
51·11	50·33	49·54	48·86	48·30	47·59	47·03	46·37	45·81	45·53	52·69	59·53	45·53	14·00
40·45	39·53	38·97	38·92	38·46	38·11	37·99	37·86	38·06	38·21	41·41	45·12	37·86	7·26
47·38	47·74	47·96	48·30	48·81	49·44	49·74	50·28	50·53	51·06	45·07	51·06	38·19	12·87
54·60	54·52	54·26	54·31	53·96	53·75	53·83	53·83	53·78	53·80	53·83	54·82	51·50	3·32
52·62	52·72	52·13	52·08	52·03	51·70	51·98	52·53	52·72	52·84	52·92	53·83	51·70	2·13
55·41	55·36	55·38	55·43	55·53	55·53	55·82	56·17	56·58	56·60	54·85	56·60	53·07	3·53
56·12	55·82	55·56	55·33	55·07	54·60	54·40	54·34	54·24	53·96	56·09	57·16	53·96	3·20
45·02	44·94	44·81	44·76	44·74	44·74	44·79	44·81	44·86	44·91	45·00	47·56	42·38	5·18

May 1883. 700 mm+ Mean time of place.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	53·60	53·15	52·89	52·28	52·06	51·93	51·42	50·66	50·23	49·84	49·29	48·81	48·15	47·69
2	42·12	41·97	42·02	42·17	42·86	43·54	43·83	44·18	44·66	44·89	45·27	45·73	46·13	46·52
3	52·48	52·79	53·30	53·78	54·09	54·40	54·67	54·80	54·92	55·02	55·13	55·26	55·53	55·69
4	56·50	56·58	56·53	56·48	56·55	56·53	56·50	56·17	55·82	55·41	54·87	54·42	54·06	53·68
5	49·99	49·59	49·13	48·78	48·81	48·65	48·52	48·37	48·05	48·12	48·20	47·94	47·84	47·71
6	48·32	48·40	48·62	49·01	49·32	49·44	49·87	49·92	50·05	49·97	49·74	49·74	49·64	49·79
7	49·01	48·86	48·93	48·78	48·62	48·57	48·02	47·89	48·15	47·96	47·66	47·35	47·28	47·43
8	49·49	49·64	49·82	50·30	50·50	50·66	50·94	51·21	51·42	51·67	52·06	52·36	52·43	52·62
9	54·87	55·13	55·69	55·92	56·07	56·24	56·17	56·24	56·43	56·48	56·32	56·17	56·14	55·79
10	54·67	54·65	54·72	54·75	55·18	55·10	55·18	55·51	55·61	55·48	55·64	55·64	55·67	55·41
11	55·21	55·21	55·23	55·41	55·48	55·41	55·43	55·53	55·56	55·33	55·21	55·05	54·82	54·60
12	52·79	52·53	52·59	52·56	52·46	52·46	52·64	52·48	52·56	52·53	52·51	52·51	52·33	52·13
13	51·06	51·14	51·29	51·50	51·75	51·96	52·01	52·21	52·13	52·18	52·23	52·23	52·16	52·06
14	51·75	51·67	51·42	51·37	51·35	51·29	51·04	51·06	51·11	50·99	50·69	50·43	50·13	49·84
15	45·73	45·32	44·89	44·49	44·18	43·78	43·52	43·22	42·88	42·40	41·70	41·29	40·73	40·27
16	37·96	37·83	37·96	38·11	38·04	38·14	38·06	38·11	38·09	37·91	37·68	37·60	37·27	37·17
17	37·22	37·27	37·12	37·32	37·40	37·29	37·73	37·86	38·04	38·19	38·56	38·72	38·77	38·95
18	41·61	41·90	42·05	42·37	42·68	43·02	43·19	43·47	43·52	43·75	43·88	43·67	43·78	43·73
19	41·29	41·26	41·34	41·44	41·49	41·36	41·44	41·70	41·85	41·85	41·92	41·97	41·97	41·97
20	42·51	42·73	42·27	42·30	42·35	42·35	42·30	42·20	42·05	41·82	41·61	41·44	41·21	41·34
21	41·03	40·88	40·63	40·60	40·58	40·55	40·65	40·50	40·37	40·22	40·14	40·02	40·04	39·81
22	39·81	39·81	39·78	39·81	39·76	39·63	39·68	39·73	39·51	39·43	39·48	39·66	39·56	39·76
23	41·59	42·10	42·05	42·10	42·40	42·63	42·81	43·14	43·34	43·39	43·49	43·49	43·42	43·39
24	44·86	45·05	45·51	45·68	45·83	46·13	46·47	46·57	46·52	46·64	46·64	46·64	46·62	46·44
25	46·90	46·98	47·18	47·28	47·56	47·48	47·25	47·28	47·28	47·35	47·35	47·00	46·72	46·39
26	46·47	46·52	46·39	46·57	46·85	46·85	46·88	46·88	46·90	46·90	46·83	46·62	46·49	46·29
27	46·37	46·47	46·83	47·08	47·45	47·48	47·96	47·89	47·84	47·89	47·99	48·17	48·45	48·52
28	51·21	51·96	52·64	53·28	53·60	53·94	54·19	54·62	54·90	55·02	55·18	55·18	55·10	55·07
29	52·56	52·18	51·67	51·29	50·64	49·94	49·29	48·52	47·84	46·98	46·08	45·15	44·13	43·34
30	35·19	34·60	34·25	33·94	33·74	33·23	33·31	33·48	33·97	35·14	36·43	37·32	38·39	39·21
31	44·74	45·02	45·45	45·66	45·83	46·08	46·34	46·18	46·18	46·18	45·93	45·66	45·42	45·20
Mean -	47·05	47·08	47·10	47·18	47·28	47·30	47·33	47·33	**47·35**	47·33	47·28	47·20	47·10	47·03

June 1883. Lat. +62° 38′ 52″.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	41·95	41·72	41·13	40·75	40·40	39·94	39·51	39·21	39·05	38·65	38·34	37·94	37·68	37·35
2	36·13	35·90	35·82	35·70	35·60	35·67	35·50	35·47	35·57	35·45	35·32	35·37	35·52	35·67
3	37·50	37·58	37·80	37·75	37·89	37·96	38·06	38·04	37·99	38·06	38·01	37·96	37·80	37·65
4	36·97	36·92	36·74	36·89	36·84	36·87	36·89	36·99	36·94	36·92	36·94	37·04	36·99	37·38
5	40·02	40·45	41·03	41·54	41·92	42·05	42·37	42·68	42·78	42·88	43·17	43·37	43·49	43·59
6	47·84	48·02	48·60	48·86	49·21	49·64	49·67	49·82	50·23	50·35	50·59	51·04	51·19	51·47
7	54·26	54·50	54·55	54·75	55·02	55·26	55·28	55·36	55·43	55·16	54·92	54·77	54·45	54·45
8	47·64	46·62	45·73	45·17	44·31	43·70	42·86	42·46	41·90	41·59	41·46	41·41	41·44	41·56
9	43·14	43·09	43·19	43·27	43·12	43·04	42·91	42·81	42·68	42·46	42·25	42·10	41·90	41·59
10	41·13	41·29	41·16	41·34	41·70	41·85	42·30	42·81	43·27	43·95	44·49	44·97	45·40	45·91
11	49·06	49·11	49·26	49·26	49·34	49·18	49·16	48·98	48·60	48·15	47·66	47·18	46·49	45·93
12	42·22	42·17	42·00	42·05	42·25	42·30	42·32	42·22	41·82	41·72	41·54	41·56	41·54	41·41
13	41·21	41·03	40·88	41·03	41·08	40·95	40·78	40·37	40·50	40·32	40·17	40·12	40·19	40·07
14	38·82	38·80	39·00	39·10	39·10	39·10	39·13	39·26	39·26	39·13	38·80	38·77	38·82	38·87
15	37·73	37·58	37·65	37·58	37·55	37·65	37·58	37·68	37·63	37·68	37·75	37·86	37·70	37·75
16	40·19	40·68	40·95	41·21	41·44	41·77	42·07	42·17	42·07	42·12	42·30	42·22	42·27	42·35
17	42·58	42·37	42·02	41·70	41·46	41·13	40·83	40·60	40·70	41·05	41·29	41·29	41·29	41·46
18	41·54	41·51	41·41	41·34	41·54	41·72	42·20	42·61	42·76	42·66	42·56	42·63	42·58	42·40
19	43·67	43·90	43·90	44·08	44·10	44·21	44·44	44·51	44·29	44·15	44·18	44·18	44·13	44·08
20	45·61	45·83	46·18	46·44	46·64	46·83	47·03	47·08	47·03	47·15	47·25	47·35	47·38	47·43
21	46·57	46·59	46·44	46·18	45·83	45·71	45·53	45·45	45·27	45·17	44·89	44·71	44·21	43·95
22	41·97	41·72	41·44	41·24	41·29	41·24	41·05	41·08	40·93	40·60	40·32	40·17	40·14	39·83
23	39·10	39·02	38·97	38·90	38·85	38·92	38·85	38·85	38·77	38·51	38·29	38·14	37·80	37·89
24	36·84	36·69	36·48	36·16	36·31	36·31	36·23	36·31	36·26	36·13	36·00	35·80	35·47	35·11
25	35·85	36·08	36·00	36·08	36·18	36·26	36·36	36·51	36·38	36·43	36·33	36·31	36·16	36·16
26	36·41	36·53	36·69	36·46	36·26	36·21	36·16	36·23	36·11	35·75	35·60	35·62	35·42	35·50
27	40·45	40·83	41·49	41·82	42·27	42·71	43·29	43·83	44·29	44·76	45·10	45·45	45·78	46·16
28	50·02	50·38	50·43	50·69	50·99	51·29	51·50	51·50	51·47	51·35	51·40	51·29	51·06	50·79
29	48·32	47·96	47·48	47·13	46·69	46·42	46·03	46·01	45·66	45·45	44·94	44·66	44·51	44·05
30	42·00	41·85	41·61	41·26	41·19	41·46	41·31	41·31	41·03	40·83	40·55	40·34	39·97	39·76
Mean -	42·22	42·22	42·20	42·20	42·20	42·25	42·25	**42·27**	42·22	42·15	42·07	42·05	41·97	41·92

Correction for Gravity +1·17 mm. at 754 mm. Barometer _____ m. above sea level. *May* 1883.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
47·00	46·52	45·96	45·48	44·86	44·44	44·21	43·73	43·14	42·56	48·32	53·60	42·56	11·04
47·00	47·56	48·10	48·83	49·44	50·05	50·59	50·91	51·40	52·13	46·34	52·13	41·97	10·16
55·74	55·87	55·94	56·04	55·99	56·09	56·14	56·22	56·27	56·43	55·10	56·43	52·48	3·95
53·18	52·46	52·18	51·77	51·60	51·42	51·04	50·86	50·61	50·33	53·99	**56·58**	50·33	6·25
47·71	47·79	47·64	47·61	47·71	47·61	47·66	47·76	47·76	48·15	48·22	49·99	47·61	2·38
49·67	49·29	49·16	49·06	48·88	48·72	48·93	49·08	48·93	48·96	49·26	50·05	48·32	1·73
47·35	47·25	47·23	47·15	47·23	47·35	47·79	48·17	48·37	49·26	47·99	49·26	47·15	2·11
52·62	52·62	52·87	52·87	52·89	53·07	53·40	53·91	54·04	54·67	52·01	54·67	49·49	5·18
55·67	55·43	55·13	54·67	54·29	54·29	54·16	54·11	54·42	54·42	**55·43**	56·48	54·11	2·37
55·33	55·18	55·02	54·85	54·77	54·75	54·75	54·77	54·97	55·07	55·10	55·67	54·65	1·02
54·31	53·80	53·60	53·45	53·20	52·92	52·82	52·77	52·69	52·74	54·42	55·56	52·69	2·87
51·67	51·37	51·16	50·91	50·69	50·50	50·53	50·50	50·71	51·04	51·86	52·79	50·50	2·29
51·75	51·62	51·42	51·40	51·45	51·16	51·32	51·35	51·50	51·70	51·70	52·23	51·06	1·17
49·37	48·96	48·47	47·94	47·64	47·40	46·93	46·59	46·47	46·03	49·59	51·75	46·03	5·72
39·71	39·28	38·85	38·67	38·34	38·21	38·14	38·09	38·14	38·06	41·24	45·73	38·06	7·67
37·04	36·79	36·51	36·48	36·41	36·53	36·64	36·67	36·92	37·07	**37·38**	38·14	36·41	1·73
39·36	39·56	39·76	39·89	40·24	40·32	40·78	40·93	41·00	41·16	38·90	41·16	37·12	4·04
43·67	43·44	43·09	42·88	42·40	42·32	42·10	41·87	41·70	41·34	42·81	43·88	41·34	2·54
42·12	42·22	42·02	41·95	42·07	42·12	42·25	42·25	42·63	42·61	41·87	42·63	41·26	1·37
41·41	41·08	41·54	41·24	41·05	41·26	41·51	41·08	40·80	40·95	41·70	42·73	40·80	1·93
39·92	39·89	39·99	39·99	39·97	39·81	39·92	39·76	39·81	39·92	40·22	41·03	39·76	1·27
39·89	40·09	40·22	40·37	40·55	40·34	40·95	41·05	41·44	41·34	40·07	41·44	39·43	2·01
43·44	43·47	43·54	43·70	43·95	44·18	44·36	44·46	44·49	44·64	43·32	44·64	41·59	3·05
46·47	46·24	46·24	46·39	46·34	46·27	46·29	46·44	46·62	46·83	46·24	46·83	44·86	1·97
46·34	46·24	46·21	46·08	46·01	45·83	45·93	45·88	45·96	46·29	46·69	47·56	45·83	1·73
46·11	45·88	45·93	45·96	46·08	46·06	46·06	46·13	46·03	46·21	46·42	46·90	45·88	1·02
48·67	48·70	48·70	48·93	48·81	49·06	49·59	49·92	50·40	50·94	48·35	50·94	46·37	4·57
55·05	54·90	54·52	54·29	54·09	53·75	53·45	53·35	52·99	52·89	53·96	55·18	51·21	3·97
42·68	41·77	40·83	40·02	39·05	38·21	37·32	36·48	35·85	35·37	44·46	52·56	35·37	17·19
39·81	40·48	41·24	41·77	42·20	42·76	42·99	43·39	43·90	44·29	38·14	44·29	**33·23**	11·06
44·79	44·21	43·80	43·52	43·22	42·88	42·76	42·53	42·22	42·20	44·66	46·34	42·20	4·14
46·93	46·78	46·67	46·59	46·49	**46·44**	46·49	46·49	46·52	46·62	46·95	49·01	44·83	4·18

Long.—115° 43′ 50″ = —7h. 42m. 55s. *June* 1883.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
36·99	36·72	36·51	36·31	36·33	36·23	36·28	36·46	36·18	36·08	38·24	41·95	36·08	5·87
36·00	36·11	36·59	36·59	36·67	36·82	37·12	37·24	37·43	37·24	36·11	37·43	35·32	2·11
37·68	37·27	36·99	36·99	36·99	36·87	36·84	36·89	36·79	36·77	37·50	38·06	36·77	1·29
37·24	37·50	37·75	37·83	38·16	38·49	38·85	39·16	39·33	39·73	37·55	39·73	36·74	2·99
43·64	43·90	44·03	44·46	44·91	45·32	45·56	46·57	46·67	47·20	43·49	47·20	40·02	7·18
51·70	51·91	52·01	52·26	52·41	52·67	52·92	53·25	53·55	53·89	50·96	53·89	47·84	6·05
53·43	52·87	52·31	51·77	51·62	50·71	50·25	49·64	48·83	48·15	**53·25**	**55·43**	48·15	7·28
41·82	42·00	42·15	42·43	42·51	42·53	42·78	43·02	42·97	43·07	43·04	47·64	41·41	6·23
41·54	41·24	40·95	40·75	40·63	40·58	40·83	40·70	41·08	40·93	41·95	43·27	40·58	2·69
46·39	46·72	47·00	47·30	47·56	47·74	48·10	48·40	48·62	49·03	44·94	49·03	41·13	7·90
45·53	44·86	44·29	43·64	42·99	42·56	42·35	42·30	42·30	42·22	46·27	49·34	42·22	7·12
41·21	41·10	41·03	40·85	40·93	40·93	40·83	40·88	40·95	41·05	41·54	42·32	40·83	1·49
39·97	39·63	39·38	39·13	39·31	39·21	39·31	39·41	39·16	38·85	40·09	41·21	38·85	2·36
38·67	38·39	38·21	37·96	37·73	37·58	37·60	37·63	37·58	37·65	38·54	39·26	37·58	1·68
37·96	38·11	38·11	38·21	38·34	38·49	38·72	38·90	39·41	39·78	38·06	39·78	37·55	2·23
42·40	42·27	42·30	42·20	42·12	42·35	42·63	42·66	42·68	42·68	42·00	42·68	40·19	2·49
41·29	41·31	41·24	41·26	41·21	41·26	41·41	41·31	41·31	41·41	41·36	42·58	40·60	1·98
42·25	42·32	42·40	42·46	42·56	42·63	42·88	43·14	43·32	43·54	42·37	43·54	41·34	2·20
44·08	44·08	44·08	44·34	44·66	44·91	45·20	45·37	45·40	45·40	44·39	45·40	43·67	1·73
47·51	47·38	47·35	47·25	47·20	47·05	46·93	46·85	46·72	46·64	46·93	47·51	45·61	1·90
43·49	43·12	42·94	42·81	42·58	42·35	42·17	42·07	42·20	42·12	44·26	46·59	42·07	4·52
39·63	39·53	39·33	39·36	39·23	39·33	39·41	39·43	39·28	39·21	40·27	41·97	39·21	2·76
37·78	37·38	37·32	37·09	36·94	36·99	36·99	37·02	36·99	36·89	38·01	39·10	36·89	2·21
34·86	34·86	34·70	34·68	34·68	34·75	34·91	34·96	35·29	35·45	**35·65**	36·84	**34·68**	2·16
36·05	36·05	35·82	35·85	36·02	36·18	36·26	36·36	36·33	36·31	36·18	36·51	35·82	0·69
35·75	36·00	36·59	36·94	37·19	37·63	38·21	38·90	39·51	39·97	36·74	39·97	35·42	4·55
46·29	46·52	46·85	47·13	47·28	47·56	48·02	48·47	49·03	49·47	45·20	49·47	40·45	9·02
50·66	50·28	50·15	49·74	49·49	49·42	49·32	49·01	48·81	48·55	50·40	51·50	48·55	2·95
43·64	43·17	42·81	42·53	42·27	42·30	42·32	42·25	42·22	42·02	44·61	48·32	42·02	6·30
39·53	39·26	38·97	38·85	38·67	38·77	38·75	38·97	39·36	39·43	40·22	42·00	38·67	3·33
41·85	41·72	41·67	**41·64**	**41·64**	41·67	41·80	41·90	41·97	42·02	42·00	43·98	40·21	3·77

July 1883. 700 m+ Mean time of place.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	40·14	40·48	40·68	41·26	41·67	42·15	42·63	43·04	43·44	43·67	44·00	44·15	44·34	44·51
2	45·12	44·97	44·71	44·66	44·44	44·36	43·93	43·80	43·54	43·24	42·83	42·53	42·05	41·70
3	40·68	40·68	40·70	40·75	40·80	40·85	40·63	40·53	40·32	40·12	39·53	39·10	38·87	39·63
4	40·73	41·03	41·26	41·46	41·85	42·25	42·91	43·02	43·37	43·54	44·03	44·34	44·71	45·07
5	46·95	47·20	47·35	47·59	47·86	47·86	48·20	48·25	48·27	48·15	48·30	48·35	48·55	48·60
6	49·21	49·11	49·11	48·91	48·70	48·60	48·30	47·89	47·38	46·90	46·57	46·16	45·71	45·20
7	42·83	43·12	43·14	43·17	43·17	43·19	43·19	43·02	42·94	42·81	42·91	42·88	42·81	42·58
8	42·37	42·51	42·48	42·63	42·63	42·76	43·04	43·02	43·04	42·97	43·04	43·19	43·27	43·39
9	44·05	44·18	44·26	44·21	44·00	43·93	43·95	43·93	43·90	43·80	43·70	43·57	43·49	43·17
10	42·17	42·12	42·02	41·95	41·87	41·72	41·44	41·34	41·61	41·56	41·49	41·56	41·54	41·46
11	42·07	41·90	41·72	41·77	41·85	41·85	41·90	41·80	41·75	41·70	41·82	41·75	41·56	41·39
12	39·58	39·28	39·16	38·97	38·92	38·85	38·70	38·65	38·36	38·19	38·09	37·86	37·68	37·65
13	37·94	37·91	37·94	38·04	38·16	38·31	38·54	38·77	38·95	39·16	39·28	39·36	39·48	39·56
14	40·19	40·34	40·43	40·53	40·65	40·98	41·34	41·46	41·46	41·44	41·39	41·44	41·49	41·61
15	42·73	42·99	43·24	43·47	43·70	43·98	44·15	44·44	44·46	44·51	44·59	44·61	44·66	44·79
16	45·25	45·30	45·45	45·37	45·45	45·42	45·30	45·37	45·27	45·15	45·12	45·12	45·00	44·71
17	44·61	44·66	44·66	44·61	44·51	44·46	44·61	44·66	44·61	44·66	44·64	44·66	44·74	44·76
18	44·15	44·00	44·00	43·80	43·67	43·70	43·59	43·59	43·54	43·52	43·39	43·24	42·99	42·78
19	41·29	41·21	41·00	41·00	40·93	40·88	40·75	40·83	40·83	40·88	40·93	40·88	40·68	40·55
20	40·02	39·92	39·78	39·89	39·83	39·89	40·02	40·17	40·32	40·37	40·32	40·24	40·22	40·17
21	38·49	38·31	38·29	38·24	38·11	38·09	37·94	37·80	37·73	37·68	37·65	37·50	37·29	37·27
22	36·56	36·46	36·46	36·48	36·43	36·41	36·46	36·64	36·67	36·77	36·79	36·79	36·67	36·36
23	36·05	35·87	35·65	35·52	35·35	35·35	35·24	35·24	35·40	35·47	35·55	35·47	35·60	35·67
24	38·41	38·49	38·62	38·77	38·97	39·28	39·46	39·68	39·89	40·04	40·22	40·43	40·75	40·90
25	42·48	42·51	42·58	42·71	43·22	43·88	44·41	45·02	45·53	46·03	46·52	46·80	47·23	47·64
26	49·89	50·10	50·35	50·48	50·76	50·91	50·96	50·91	50·84	50·76	50·50	50·20	49·92	49·64
27	49·03	48·96	48·98	48·83	48·72	48·52	48·45	48·37	48·32	47·99	47·79	47·48	47·10	46·85
28	44·44	44·24	43·98	43·85	43·85	43·88	43·73	43·54	43·52	43·44	43·32	43·17	42·86	42·63
29	43·12	43·34	43·44	43·57	43·75	43·90	44·13	44·29	44·29	44·21	44·18	44·10	44·08	43·95
30	44·10	44·18	44·31	44·44	44·74	44·86	45·02	45·07	45·32	45·51	45·61	45·63	45·48	45·51
31	46·57	46·85	47·00	47·18	47·51	47·69	47·99	48·20	48·32	48·50	48·70	48·72	48·70	48·62
Mean -	42·63	42·66	42·66	42·71	42·78	42·86	42·94	42·99	**43·02**	42·99	42·99	42·94	42·88	42·86

August 1883. Lat. +62° 38′ 52″.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	47·96	47·91	47·96	48·10	48·15	48·17	48·30	48·12	47·99	47·91	47·91	47·66	47·43	47·10
2	45·81	45·78	45·83	45·86	45·78	45·83	45·63	45·56	45·37	45·45	45·22	44·94	44·61	44·26
3	42·25	41·87	41·75	41·10	41·10	40·75	40·68	40·48	40·14	39·92	39·73	39·68	39·63	39·51
4	39·13	39·71	40·19	40·98	41·41	41·75	42·17	42·56	42·88	43·37	43·54	43·62	43·70	43·85
5	44·64	44·97	45·25	45·37	45·63	45·66	45·45	45·40	45·15	44·94	44·76	44·46	44·15	43·90
6	40·53	39·97	39·73	39·63	39·33	38·80	38·62	38·59	38·09	37·78	37·68	37·80	37·89	37·99
7	41·08	41·21	41·31	41·82	42·53	42·94	43·62	44·10	44·97	45·51	46·11	46·44	46·83	47·08
8	50·76	50·99	51·11	51·04	51·09	51·24	51·06	51·11	51·21	51·67	51·93	52·41	52·43	52·53
9	53·18	53·15	53·07	53·18	53·18	53·23	53·25	53·18	52·74	52·48	52·31	51·98	51·70	51·37
10	49·52	49·16	48·81	48·60	48·45	48·17	48·10	47·89	47·56	47·25	47·03	46·90	46·78	46·62
11	45·00	44·81	44·81	44·71	44·41	44·31	44·26	44·24	44·26	44·24	44·13	44·05	43·88	43·52
12	41·34	41·03	40·85	40·75	40·50	40·55	40·58	40·45	40·24	39·97	39·81	39·76	39·61	39·38
13	36·64	36·48	36·18	36·05	36·08	36·00	35·80	35·60	35·32	35·50	35·24	35·32	35·19	35·09
14	34·60	34·84	35·16	35·45	35·55	35·60	35·60	35·80	36·05	36·28	36·62	36·92	37·24	37·58
15	40·37	40·48	40·78	41·03	41·24	41·46	41·56	41·77	42·10	42·10	42·10	42·30	42·32	42·46
16	42·00	41·72	41·54	41·29	41·26	41·31	41·05	40·60	40·43	40·14	39·94	39·78	39·28	39·13
17	37·60	37·58	37·60	37·68	37·68	37·75	37·80	37·73	37·73	37·91	38·14	38·06	37·91	37·91
18	38·24	38·14	38·14	38·19	38·24	38·19	37·99	37·89	37·55	37·43	37·22	37·07	36·99	36·64
19	32·72	32·14	31·69	31·20	31·05	30·87	30·97	30·89	30·97	31·18	31·51	31·86	32·21	32·60
20	35·57	35·75	36·11	36·28	36·59	36·94	37·12	37·48	38·06	38·36	38·97	39·38	39·83	40·27
21	42·58	42·40	42·25	42·07	42·02	42·05	42·00	41·44	41·21	40·98	40·83	40·78	40·45	40·37
22	40·19	40·19	40·27	40·29	40·32	40·37	40·48	40·40	40·73	40·80	40·88	40·98	40·98	41·05
23	41·41	41·51	41·64	41·77	41·82	41·82	41·85	41·92	41·97	42·00	41·92	41·95	42·00	42·15
24	45·10	45·35	45·51	45·73	46·03	46·42	46·67	46·80	46·90	46·85	46·75	46·69	46·29	46·03
25	43·98	43·70	43·42	43·02	42·91	42·88	42·76	42·66	42·48	42·51	42·43	42·43	42·43	42·53
26	46·85	47·18	47·56	47·99	48·52	48·70	49·08	49·21	49·54	49·67	49·84	50·02	50·15	50·05
27	49·77	49·84	49·84	49·77	49·59	49·64	49·84	49·16	49·11	48·78	48·83	48·50	47·99	47·74
28	46·75	46·59	46·85	47·00	47·28	47·71	48·10	48·17	48·05	48·07	48·17	48·10	47·81	47·84
29	48·27	48·12	47·99	47·89	47·99	48·17	48·37	48·20	48·25	47·69	47·56	47·38	46·98	46·67
30	43·85	43·22	43·04	42·97	42·68	42·48	42·48	42·27	42·22	42·07	42·17	42·20	42·30	42·30
31	43·54	43·83	44·13	44·41	44·86	45·35	45·76	46·03	46·08	46·42	46·64	46·78	46·93	46·98
Mean -	42·94	42·88	42·91	42·94	43·02	43·07	**43·14**	43·09	43·07	43·07	43·09	43·12	43·04	42·99

Fort Rae.

Corrections for Gravity +1·17 mm. at 754 mm. Barometer _____ m. above sea level. *July* 1883.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
44·49	44·46	44·56	44·56	44·61	44·79	44·89	44·89	44·91	45·05	43·47	45·05	40·14	4·91
41·44	40·98	40·65	40·45	40·45	41·10	41·13	41·00	40·63	40·65	42·51	45·12	40·45	4·67
39·66	39·56	39·58	39·51	39·48	39·48	39·41	39·48	39·73	40·32	39·97	40·85	38·87	1·98
45·20	45·20	45·48	45·63	45·81	45·93	46·06	46·44	46·62	46·62	44·10	46·62	40·73	5·89
48·55	48·45	48·40	48·37	48·45	48·42	48·52	48·83	49·06	49·23	48·25	49·23	46·95	2·28
44·66	44·15	43·80	43·57	44·64	43·73	43·24	42·99	44·03	43·22	46·08	49·21	42·99	6·22
42·56	42·32	42·20	42·02	41·77	41·59	41·80	41·92	41·82	42·07	42·58	43·19	41·59	1·60
43·52	43·52	43·52	43·47	43·54	43·59	43·80	43·78	43·85	43·85	43·19	43·85	42·37	1·48
42·88	42·68	42·32	42·00	41·87	41·77	41·77	41·90	41·97	42·00	43·14	44·26	41·77	2·49
41·26	41·05	41·05	40·93	40·85	41·05	41·24	41·61	41·67	41·95	41·51	42·17	40·85	1·32
41·39	41·26	41·16	41·13	40·73	40·65	40·48	40·19	39·99	39·89	41·31	42·07	39·89	2·18
37·50	37·48	37·38	37·38	37·35	37·38	37·38	37·53	37·70	37·89	38·11	39·58	37·35	2·23
39·48	39·58	39·68	39·71	39·73	39·78	39·86	39·92	39·99	40·14	39·13	40·14	37·91	2·23
41·54	41·49	41·44	41·49	41·49	41·59	41·72	41·87	42·05	42·51	41·34	42·51	40·19	2·32
44·84	44·74	44·66	44·66	44·64	44·66	44·76	44·84	44·97	45·17	44·34	45·17	42·73	2·44
44·59	44·46	44·46	44·39	44·26	44·24	44·36	44·54	44·54	44·66	44·91	45·45	44·24	1·21
44·66	44·44	44·39	44·24	44·08	43·93	43·93	44·10	44·00	44·08	44·44	44·76	43·93	0·83
42·58	42·22	42·12	42·00	41·82	41·61	41·67	41·54	41·51	41·54	42·86	44·15	41·51	2·64
40·40	40·24	40·14	40·04	39·97	40·14	40·19	40·12	40·09	40·04	40·58	41·29	39·97	1·32
40·09	39·86	39·58	39·21	38·97	38·92	38·72	38·70	38·56	38·65	39·68	40·37	38·56	1·81
37·27	37·19	36·99	36·87	36·77	36·77	36·72	36·79	36·87	36·72	37·48	38·49	36·72	1·77
36·02	35·87	35·87	35·92	36·05	35·97	36·00	36·11	36·05	36·05	36·33	36·79	35·87	0·92
35·82	36·28	36·59	37·14	37·24	37·48	37·73	37·96	38·09	38·34	**36·26**	38·34	**35·24**	3·10
41·00	41·16	41·26	41·59	41·67	41·80	42·02	42·35	42·53	42·46	40·50	42·53	38·41	4·12
48·10	48·40	48·55	48·62	48·78	49·06	49·37	49·44	49·57	49·69	46·49	49·69	42·48	7·21
49·52	49·44	49·23	49·18	49·23	49·34	49·34	49·34	49·16	48·96	**49·94**	**50·96**	48·96	2·00
46·95	46·69	46·57	46·16	45·83	45·42	45·12	44·84	45·00	44·81	47·20	49·03	44·81	4·22
42·43	42·37	42·22	42·20	42·27	42·53	42·58	42·71	42·76	42·94	43·14	44·44	42·20	2·24
43·83	43·67	43·54	43·57	43·59	43·49	43·54	43·70	43·80	43·93	43·80	44·29	43·12	1·17
45·45	45·37	45·40	45·40	45·42	45·53	45·91	46·06	46·32	46·29	45·30	46·32	44·10	2·22
48·52	48·45	48·30	48·22	48·05	48·02	48·17	48·25	48·20	48·15	48·05	48·72	46·57	2·15
42·78	42·68	42·61	42·58	**42·56**	42·58	42·63	42·71	42·78	42·83	42·78	44·02	41·34	2·68

Long.--115° 43′ 50″ = —7h. 42m. 55s. *August* 1883.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
46·88	46·67	46·57	46·44	46·29	46·18	46·21	45·98	45·83	45·78	47·23	48·30	45·78	2·52
44·03	43·93	43·78	43·37	43·12	43·09	43·29	42·94	42·73	42·35	44·51	45·86	42·35	3·51
39·48	39·41	39·33	39·28	39·10	38·85	38·75	38·65	38·54	38·65	39·94	42·25	38·54	3·71
43·90	43·73	43·83	43·93	43·88	43·95	44·13	44·29	44·36	44·46	42·88	44·46	39·13	5·33
43·57	43·34	42·97	42·56	42·10	41·82	41·61	41·24	41·08	40·83	43·78	45·66	40·83	4·83
37·96	38·11	38·54	38·75	39·16	39·38	39·99	40·34	40·32	40·43	38·97	40·53	37·68	2·85
47·30	47·56	48·02	48·37	48·72	49·29	49·79	50·23	50·30	50·50	46·06	50·50	41·08	9·42
52·43	52·41	52·43	52·59	52·77	52·87	52·87	52·97	53·15	53·15	**52·01**	53·15	50·76	2·39
50·94	50·74	50·53	50·35	50·18	49·97	49·82	49·82	49·82	49·79	51·67	**53·25**	49·79	3·46
46·27	45·91	45·91	45·66	45·61	45·48	45·40	45·17	44·89	44·97	46·93	49·52	44·89	4·63
43·39	43·14	42·81	42·66	42·43	42·15	41·95	41·87	41·97	41·64	43·52	45·00	41·64	3·36
39·21	38·87	38·67	38·41	38·21	37·96	37·60	37·43	37·17	36·92	39·38	41·34	36·92	4·42
34·73	34·40	34·08	34·02	33·87	33·99	34·08	34·18	34·25	34·48	35·11	36·64	33·87	2·77
37·96	38·29	38·56	38·85	38·95	39·23	39·56	39·71	40·02	40·19	37·27	40·19	34·60	5·59
42·51	42·35	42·30	42·32	42·35	42·43	42·56	42·53	42·43	42·22	41·92	42·56	40·37	2·19
38·67	38·59	38·62	38·51	38·49	38·19	38·06	37·83	37·75	37·58	39·66	42·00	37·58	4·42
38·04	37·91	37·86	37·80	37·94	37·99	38·14	38·26	38·31	38·31	37·91	38·31	37·58	0·73
36·43	36·13	35·95	35·65	35·24	34·91	34·65	34·08	33·64	33·23	36·59	38·24	33·23	5·01
32·91	33·36	33·59	34·02	34·28	34·48	34·58	34·81	35·06	35·26	**32·67**	35·26	**30·87**	4·39
40·70	41·03	41·39	41·82	42·07	42·43	42·46	42·66	42·76	42·66	39·46	42·76	35·57	7·19
40·24	40·22	40·29	40·27	40·24	40·02	40·09	40·09	40·12	40·14	40·95	42·58	40·02	2·56
41·05	41·19	41·16	41·16	41·16	41·24	41·34	41·31	41·41	41·41	40·85	41·41	40·19	1·22
42·27	42·46	42·51	42·76	43·04	43·37	43·70	44·08	44·56	44·86	42·48	44·86	41·41	3·45
46·03	45·35	45·12	44·84	44·91	45·00	44·94	44·94	44·44	44·05	45·71	46·90	44·05	2·85
42·63	42·91	43·04	43·22	43·49	44·08	44·69	45·35	45·96	46·39	43·42	46·39	42·43	3·96
50·02	49·89	49·72	49·62	49·67	49·69	49·79	49·84	49·77	49·84	49·26	50·15	46·85	3·30
47·54	47·35	47·15	46·85	46·69	46·88	46·88	47·03	47·03	46·75	48·27	49·84	46·69	3·15
47·81	47·79	47·45	47·74	47·61	47·43	47·69	47·84	47·96	48·30	47·66	48·30	46·59	1·71
46·37	46·01	45·76	45·51	45·07	44·76	44·59	44·34	44·29	44·10	46·67	48·37	44·10	4·27
42·27	42·30	42·32	42·46	42·63	42·91	43·07	43·27	43·32	43·32	42·68	43·85	42·07	1·78
47·00	47·05	47·20	47·30	47·38	47·54	47·69	47·69	47·71	47·69	46·34	47·71	43·54	4·17
42·91	42·86	42·81	42·81	**42·78**	42·83	42·91	42·94	42·94	42·91	42·97	44·71	41·00	3·71

September 1882. Height of the Thermometers

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	12·2	11·7	10·0	8·4	6·9	5·7	6·2	7·1	8·4	9·7	9·8	11·2	13·5	14·9
2	8·3	7·8	8·3	8·1	7·9	8·2	8·2	8·6	8·6	8·9	6·6	5·8	5·9	4·9
3	2·6	3·9	2·9	2·7	3·0	3·4	5·9	4·0	6·8	7·7	5·6	10·5	7·9	9·0
4	3·8	3·6	2·1	1·3	0·8	1·9	3·0	4·9	6·3	6·8	7·6	9·2	7·9	8·9
5	4·1	4·3	3·6	3·6	3·1	3·4	3·7	4·6	5·7	6·0	6·4	7·9	10·1	9·3
6	4·7	4·7	5·2	6·0	6·4	6·7	6·3	6·2	7·2	7·4	6·8	7·8	8·4	7·9
7	5·4	5·2	5·5	5·3	5·3	5·8	7·3	7·3	7·9	8·7	10·7	10·2	9·7	9·1
8	6·3	6·3	5·9	5·2	4·1	4·6	8·2	9·0	11·8	13·5	12·9	14·1	14·7	15·2
9	5·3	4·9	4·9	3·6	4·3	6·4	9·0	10·1	11·4	12·3	13·2	13·9	14·3	13·0
10	8·5	9·6	9·1	9·0	8·3	9·5	10·9	11·5	11·6	12·1	12·2	12·7	13·3	12·8
11	10·1	10·2	10·3	10·6	10·1	10·2	10·9	10·9	11·2	11·5	11·8	12·1	12·2	12·5
12	11·9	11·8	11·3	11·5	11·7	11·3	11·5	11·1	10·9	11·2	11·3	11·4	11·8	11·7
13	7·3	7·4	7·3	6·7	6·3	6·2	6·4	6·8	7·3	7·8	8·1	8·5	8·7	8·8
14	3·4	3·0	2·7	2·2	1·9	2·3	3·0	4·8	6·2	9·4	10·1	10·3	10·3	11·8
15	4·7	4·1	3·6	3·0	3·0	2·8	5·6	7·3	8·2	9·3	10·2	11·8	12·2	14·3
16	5·2	5·2	5·2	5·2	5·6	5·3	5·5	6·2	6·2	6·7	7·6	9·8	12·9	11·2
17	3·0	3·4	2·7	2·4	2·2	2·3	4·7	6·3	7·8	8·4	8·1	8·6	10·1	10·4
18	7·4	7·4	7·4	7·2	7·4	8·0	8·7	8·9	8·9	9·1	9·6	11·2	12·1	11·9
19	9·4	9·0	9·0	9·0	9·0	8·9	10·1	11·1	11·9	14·3	15·7	17·2	18·2	19·1
20	8·7	8·4	7·9	7·1	6·8	6·6	8·8	8·7	9·9	9·1	7·9	7·3	7·8	8·4
21	4·6	5·2	5·2	4·6	4·1	3·8	4·9	5·3	6·6	7·6	8·6	9·4	10·6	9·3
22	1·0	0·6	1·3	1·2	0·3	1·5	4·4	5·7	6·3	7·8	8·3	9·1	10·3	10·7
23	5·7	6·0	5·4	5·6	6·3	5·2	5·8	6·7	7·8	9·2	9·6	10·0	10·3	10·2
24	5·7	5·7	5·4	5·7	5·4	5·6	6·2	6·4	7·0	8·9	9·6	9·4	9·8	10·7
25	9·0	9·6	10·7	9·4	10·8	8·6	10·0	11·8	12·8	13·5	14·5	16·0	15·2	14·5
26	7·4	6·7	6·8	6·3	6·3	4·6	4·6	4·3	6·5	5·8	5·4	5·2	6·3	6·7
27	0·8	1·1	0·9	0·5	0·3	− 0·3	− 0·3	0·1	1·2	2·4	2·4	2·9	2·3	3·3
28	− 2·4	− 3·2	− 2·9	− 2·5	− 2·1	− 2·9	− 2·7	− 2·4	2·3	3·6	4·1	5·3	6·4	3·1
29	− 1·3	− 1·2	− 1·3	− 2·2	− 2·2	− 2·4	− 2·3	− 1·8	0·2	0·3	− 0·2	0·7	1·9	3·6
30	− 2·2	− 2·4	− 1·8	− 0·8	− 0·7	− 0·6	− 0·3	− 0·4	1·3	2·4	2·6	2·9	3·3	3·0
Mean -	5·33	5·33	5·17	4·89	4·78	4·78	5·83	6·39	7·56	8·39	8·56	9·39	9·94	10·00

October 1882. $\varphi = +\ 62^\circ\ 38'\ 52''.$

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	− 1·1	− 1·2	− 1·3	− 1·6	− 0·6	− 2·4	− 2·4	− 0·4	1·1	3·3	3·8	4·9	6·0	5·7
2	− 0·5	− 0·7	− 0·8	− 1·1	− 1·3	− 1·3	− 0·6	0·2	2·6	4·7	6.1	6·6	8·6	8·8
3	0·4	0·1	− 0·6	− 0·8	− 1·2	− 1·3	1·2	3·7	4·9	7·2	8·6	10·1	10·6	10·9
4	1·3	1·7	1·4	1·9	1·9	0·9	0·8	3·0	4·8	7·7	9·8	10·7	11·3	11·4
5	5·2	4·5	2·0	1·9	2·4	1·9	2·7	3·0	4·0	1·6	2·5	2·6	3·6	3·8
6	1·9	2·4	2·0	1·4	1·3	1·2	0·8	1·2	1·4	2·0	1·8	3·0	3·7	4·1
7	3·6	3·6	3·7	3·6	3·4	3·6	3·7	3·6	3·5	3·7	4·4	4·5	5·2	6·9
8	3·0	2·4	2·6	2·6	1·9	1·8	1·9	1·9	5·1	3·5	5·7	5·2	6·6	6·6
9	1·4	1·6	1·3	2·4	1·4	2·0	2·8	4·5	6·5	7·9	10·1	10·3	10·2	10·2
10	2·4	2·5	1·8	0·8	1·1	1·1	0·7	1·1	0·8	1·4	3·5	5·8	5·2	6·8
11	0·3	0·3	0·4	0·6	0·3	0·0	0·3	0·6	1·2	2·1	2·7	3·1	3·4	3·4
12	1·3	1·4	1·5	1·9	1·9	2·4	2·6	2·9	3·8	4·6	5·1	5·4	5·3	5·2
13	4·1	4·1	3·6	3·7	3·8	3·4	3·5	3·6	4·0	3·6	3·9	4·1	4·2	3·8
14	1·3	1·3	0·9	0·8	0·6	0·3	0·3	0·3	0·3	− 0·3	− 0·4	0·0	− 0·2	1·1
15	1·6	1·3	0·8	0·8	0·8	0·3	0·3	1·1	1·2	1·3	1·6	2·4	3·9	2·3
16	− 0·8	− 0·8	− 0·8	− 0·9	− 1·1	− 0·8	− 2·2	− 0·8	1·3	2·7	3·6	1·6	0·7	− 0·6
17	− 4·3	− 4·7	− 4·8	− 4·9	− 5·5	− 5·6	− 5·6	− 5·0	− 4·5	− 3·5	− 2·1	− 1·2	1·0	− 2·0
18	− 3·2	− 2·4	− 1·7	− 1·3	− 1·6	− 0·3	− 0·1	0·3	0·6	0·8	0·9	1·2	1·3	1·6
19	0·6	0·5	0·3	0·7	0·3	− 1·3	− 1·1	− 1·3	− 1·0	− 0·7	− 0·4	− 0·4	− 0·3	− 0·2
20	− 2·4	− 2·4	− 2·4	− 2·3	− 2·4	− 2·4	− 2·2	− 2·1	− 2·0	− 1·3	− 1·2	− 1·3	− 1·3	− 1·5
21	− 2·9	− 2·8	− 2·8	− 1·9	− 1·5	− 0·7	− 1·2	− 1·3	− 1·1	− 0·6	1·1	1·7	1·1	1·3
22	− 0·1	− 0·2	− 0·3	− 0·3	− 0·3	− 0·6	− 0·4	− 0·2	0·2	0·9	1·3	1·2	1·2	1·7
23	− 0·7	− 0·8	− 0·6	− 0·8	− 0·9	− 1·1	− 1·3	− 1·2	− 0·6	0·3	0·4	0·3	0·3	− 0·3
24	− 2·2	− 2·4	− 2·4	− 2·6	− 2·9	− 3·3	− 3·5	− 3·4	− 2·9	− 1·8	− 1·9	− 1·3	− 1·1	− 1·3
25	− 2·9	− 3·8	− 4·0	− 4·3	− 4·4	− 4·4	− 4·6	− 4·3	− 4·0	− 3·2	− 2·7	− 1·8	− 1·6	− 1·2
16	− 1·9	− 2·1	− 1·9	− 1·9	− 1·8	− 1·3	− 1·4	− 1·3	− 1·9	− 1·3	− 1·1	− 0·8	− 0·6	0·2
27	− 1·1	− 1·6	− 1·3	− 1·3	− 1·3	− 1·3	− 1·4	− 1·9	− 1·8	− 1·6	− 1·6	− 1·4	− 1·6	− 1·6
28	0·5	0·5	0·6	0·4	0·4	0·8	0·9	0·8	1·1	1·3	1·6	1·7	1·4	1·3
29	− 0·1	− 0·1	0·0	0·0	− 0·1	− 0·1	− 0·2	− 0·1	0·3	0·3	− 1·8	− 4·1	− 4·7	− 5·0
30	− 8:1	− 7·8	− 7·8	− 7·2	− 7·2	− 7·1	− 6·9	− 6·7	− 6·3	− 6·0	− 5·8	− 5·7	− 5·9	− 6·2
31	− 5·6	− 5·7	− 6·1	− 6·3	− 6·9	− 7·2	− 7·2	− 7·3	− 7·7	− 7·7	− 7·2	− 7·7	− 8·3	− 8·8
Mean -	− 0·28	− 0·39	− 0·56	− 0·50	− 0·61	− 0·72	− 0·61	− 0·17	0·50	1·06	1·67	1·94	2·22	2·22

above the ground 1·78 m. *September* 1882.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
13·5	14·6	14·2	10·7	8·0	9·0	8·4	9·1	8·9	8·3	10·00	15·9	5·7	10·2
6·6	6·7	6·4	6·1	4·5	3·9	3·6	3·0	3·2	3·2	6·39	9·5	3·0	6·5
7·9	7·4	6·3	7·4	4·9	4·8	4·4	3·8	4·3	4·3	5·50	13·1	2·2	10·9
8·7	7·6	7·1	6·2	5·4	4·7	4·6	4·9	4·9	4·6	5·28	10 3	0·8	9·5
9·0	7·9	6·8	6·9	5·7	5·3	5·2	4·9	5·1	4·8	5·72	10·3	2·9	7·4
7·9	7·8	7·6	7·0	7·3	6·4	6·3	5·7	5·7	5·7	6·61	10 9	4·1	6·8
8·1	8·2	9·0	8·3	7·4	7·4	7·2	6·3	6·3	6·3	7·39	10·7	4·4	6·3
14·3	13·5	14·2	11·2	8·4	7·4	6·6	6·9	5·8	6·3	9·44	15·6	3·7	11·9
12·4	11·7	13·3	11·2	10·7	10·0	9·6	9·3	9·6	9·4	9·72	15·6	3·3	12·3
12·6	12·5	12·4	11·2	10·7	9·8	9·8	10·0	10·0	9·9	10·83	14·5	8·3	6·2
12·5	12·1	11·7	11·8	10·7	10·7	11·2	12·1	11·5	11·3	11·28	13·3	9·7	3·6
13·2	11·9	11·5	10·7	10·4	9·8	10·1	8·2	7·4	7·7	10·89	13·8	7·4	6·4
9·3	8·6	6·9	7·1	6·6	6·0	5·3	4·8	4·1	3·4	6·89	10·1	3·4	6·7
11·7	10·9	11·5	9·0	6·9	6·2	5·7	5·2	4·9	4·6	6·56	12·2	1·9	10·3
11·2	9·7	9·0	7·9	6·2	5·4	6·6	5·7	5·7	5·4	7·22	15·6	2·4	13·2
10·4	10·6	12·5	9·0	7·5	6·8	6·6	5·8	5·7	4·1	7·39	14·5	4·1	10·4
9·6	9·8	8·2	8·2	7·9	7·9	7·6	7·4	7·4	7·7	6·78	12·6	2·2	10·4
11·7	11·2	11·2	9·6	9·3	9·0	9·1	9·0	9·1	9·1	9·33	13·1	7·2	5·9
18·4	17·7	17·7	14·9	10·8	9·6	11·1	10·7	9·6	9·4	**12·56**	**20·4**	8·6	11·8
10·1	9·6	8·8	8·1	7·9	6·8	6·9	6·3	6·0	5·2	7·89	10·7	5·2	5·5
9·6	8·4	9·0	6·4	4·9	3·3	3·0	1·9	2·2	1·6	5·83	12·1	1·6	10·5
8·9	8·4	7·7	6·3	6·3	6·3	5·3	5·7	5·9	6·0	5·61	12·3	0·2	12·1
9·6	9·2	7·9	7·7	7·9	7·4	7·4	6·4	6·3	6·4	7·50	11·1	4·9	6·2
10·4	9·6	9·8	7·9	7·4	7·3	7·9	7·9	8·2	8·4	7·78	10·7	5·2	5·5
13·6	11·4	11·6	8·9	8·3	8·0	7·5	7·4	7·9	7·8	10·78	18·3	7·2	11·1
6·7	5·4	3·9	2·9	2·3	1·9	2·0	1·3	1·3	0·4	4·61	8·6	0·4	8·2
2·9	1·9	1·3	− 0·3	0·0	− 0·2	− 0·3	− 0·3	− 0·8	− 1·8	0·83	3·8	− 1·8	5·6
2·4	0·6	0·7	− 0·8	− 0·8	− 0·4	− 0·8	− 1·1	− 1·2	− 1·3	0·06	8·1	**− 3·7**	11·8
− 0·3	0·7	− 0·6	− 1·9	− 0·7	− 1·3	− 0·9	− 2·0	− 2·2	− 1·9	**− 0·78**	5·5	− 2·8	8·3
2·4	2·2	1·4	1·2	1·4	1·1	0·8	− 0·8	− 0·6	− 0·8	0·61	4·0	− 2·6	6·6
9·50	8·94	8·67	7·39	6·44	6·00	5·94	5·50	5·39	5·17	6·89	11·91	3·30	8·61

$\lambda = -115° 43' 50'' = -$ 7h. 42m. 55s. *October* 1882.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
5·2	4·1	3·7	2·4	1·3	0·3	− 0·3	0·3	− 0·1	− 0·1	1·28	7·0	− 3·7	10·7
7·4	6·8	5·7	2·9	2·4	2·8	1·3	1·3	1·3	0·6	2·67	9·7	− 1·4	11·1
9·4	7·4	5·8	4·1	3·6	1·9	1·1	0·3	1·1	1·3	3·72	**12·7**	− 1·7	14·4
10·9	9·6	7·1	4·8	4·6	5·2	5·7	5·7	5·2	5·3	**5·56**	12·6	− 0·1	12·7
3·6	3·7	3·0	2·4	2·4	2·5	1·9	1·9	0·2	0·8	2·67	5·2	− 0·3	5·5
3·9	3·8	3·8	4·0	4·1	4·1	3·8	3·7	3·6	3·6	2·78	4·6	0·8	3·8
4·4	4·9	3·4	3·0	2·4	2·5	2·4	2·4	3·0	3·1	3·67	8·2	2·4	5·8
6·8	6·8	4·2	4·1	2·8	3·0	3·1	3·0	3·0	2·2	3·72	7·6	1·3	6·3
8·3	6·3	5·7	5·7	5·2	5·2	4·7	4·3	3·6	3·1	5·22	12·3	0·8	11·5
6·0	3·7	2·8	2·1	2·0	1·8	1·3	1·2	0·8	0·2	2·39	7·8	0·2	7·6
3·4	3·0	2·4	1·8	1·1	0·8	0·8	0·8	0·8	1·3	1·44	4·1	− 0·2	4·3
4·7	5·2	5·2	5·1	4·8	4·5	4·2	4·6	4·7	4·1	3·83	5·8	0·8	5·0
3·3	3·1	2·1	2·5	2·4	2·4	2·4	2·1	1·9	1·4	3·22	4·6	1·4	3·2
1·1	1·2	1·1	0·9	0·9	0·9	0·6	0·7	0·8	0·8	0·61	2·2	− 0·4	2·6
1·1	− 0·3	− 0·2	− 0·8	− 0·2	− 0·1	− 0·1	− 0·1	− 0·4	− 0·6	0·78	5·9	− 0·8	6·7
− 1·2	− 1·6	− 1·9	− 1·9	− 2·0	− 2·4	− 2·5	− 2·9	− 3·2	− 3·9	− 0·94	4·5	− 3·9	8·4
− 1·8	− 1·7	− 2·3	− 3·3	− 4·0	− 4·0	− 3·5	− 2·8	− 2·5	− 2·9	− 3·39	2·6	− 5·6	8·2
1·8	1·4	1·3	0·9	1·4	1·1	0·7	0·4	0·3	0·6	0·28	1·8	− 5·1	6·9
0·0	− 1·1	− 1·8	− 1·4	− 1·8	− 1·4	− 1·6	− 1·8	− 1·8	− 2·3	− 0·83	0·9	− 2·3	3·2
− 2·0	− 2·6	− 3·4	− 3·5	− 2·8	− 2·5	− 3·3	− 3·5	− 3·4	− 3·5	− 2·39	0·4	− 3·7	4·1
1·1	1·1	0·3	0·4	0·3	0·3	0·2	0·2	0·3	0·3	− 0·28	1·7	− 2·9	4·6
1·4	0·1	0·1	0·3	0·1	0·2	0·2	− 0·1	− 0·3	− 0·5	0·22	2·2	− 0·6	2·8
− 0·6	− 0·8	− 0·9	− 1·0	− 1·3	− 1·3	− 1·3	− 1·4	− 1·7	− 1·9	− 0·83	0·9	− 1·9	2·8
− 1·3	− 1·4	− 1·6	− 1·6	− 1·7	− 2·1	− 2·7	− 3·1	− 3·5	− 3·0	− 2·28	− 0·8	− 3·9	3·1
− 1·3	− 1·3	− 1·9	− 1·9	− 2·2	− 2·7	− 3·7	− 4·4	− 3·4	− 2·4	− 3·00	− 0·8	− 4·8	4·0
− 0·7	− 1·2	− 1·3	− 0·8	− 0·8	− 0·8	− 0·9	− 1·1	− 1·1	− 1·3	− 1·22	0·7	− 2·1	2·8
− 1·4	− 1·2	− 0·8	− 0·6	− 0·3	− 0·1	0·1	0·2	0·1	0·3	− 1·00	1·4	− 2·0	3·4
1·4	1·4	1·8	1·7	1·3	0·9	0·3	− 0·1	0·5	0·5	0·94	2·3	− 0·1	2·4
− 5·1	− 5·8	− 6·6	− 6·7	− 6·9	− 6·8	− 7·1	− 7·6	− 7·7	− 7·9	− 3·50	0·5	− 7·9	8·4
− 6·7	− 7·2	− 7·2	− 7·2	− 6·9	− 6·9	− 6·7	− 5·9	− 5·1	− 5·1	− 6·67	− 5·0	− 8·1	3·1
− 8·7	− 9·7	− 9·9	−10·4	−10·4	−11·3	−12·1	−11·6	−11·2	−11·6	**− 8·61**	− 5·6	**−12·1**	6·5
1·78	1·22	0·61	0·28	0·06	− 0·06	− 0·33	− 0·44	− 0·44	− 0·56	0·33	3.81	− 2·19	6·00

November 1882. Height of the Thermometers

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	−12·9	−12·9	−14·6	−15·6	−15·4	−15·6	−15·7	−14·2	−13·1	−12·3	−10·9	−10·2	− 8·8	− 8·2
2	− 4·6	− 4·2	− 4·6	− 4·6	− 4·6	− 4·4	− 5·1	− 5·4	− 5·5	− 5·6	− 4·8	− 4·6	− 4·6	− 4·5
3	− 7·2	− 7·8	− 7·9	− 9·4	−11·0	−12·1	−13·1	−13·0	−13·0	−12·6	−11·8	−11·4	−10·7	−10·5
4	− 6·4	− 5·9	− 5·4	− 4·9	− 4·9	− 4·8	− 4·6	− 4·6	− 4·3	− 4·3	− 6·1	− 6·3	− 6·6	− 6·9
5	−11·7	−12·1	−12·6	−12·6	−12·7	−12·6	−12·2	−12·2	−12·2	−12·0	−12·1	−12·2	−12·1	−12·2
6	−16·9	−16·1	−15·8	−16·3	−16·8	−16·3	−16·3	−16·3	−16·0	−14·4	−13·3	−13·0	−12·3	−12·9
7	−16·2	−16·9	−18·4	−19·8	−20·7	−21·0	−21·7	−21·7	−21·4	−21·7	−20·7	−19·3	−19·0	−19·1
8	−22·3	−22·9	−23·2	−25·7	−25·7	−26·2	−27·3	−26·8	−22·9	−22·4	−20·9	−22·2	−22·4	−21·0
9	−15·1	−15·6	−16·1	−16·9	−17·6	−17·4	−18·4	−18·9	−16·3	−16·9	−16·1	−14·8	−14·3	−14·0
10	−11·7	−11·6	−11·3	−11·1	−11·0	−11·6	−10·4	−10·0	− 9·4	− 8·8	− 7·3	− 8·9	− 8·3	− 7·7
11	− 5·1	− 5·1	− 5·6	− 5·6	− 6·4	− 6·7	− 8·6	− 9·8	− 8·1	− 6·7	− 4·3	− 8·2	− 6·3	− 7·8
12	−13·1	−13·3	−14·1	−15·0	−15·3	−15·0	−14·7	−15·3	−13·7	−12·3	− 9·9	− 9·9	− 8·1	− 7·7
13	1·1	− 0·6	0·3	− 0·3	− 1·8	− 3·6	− 6·9	− 7·7	− 8·3	− 9·4	−10·4	−11·6	−12·5	−13·4
14	−15·7	−15·9	−14·7	−14·0	−13·4	−12·7	−12·2	−11·4	−10·4	− 9·5	− 9·4	− 9·2	− 9·5	− 9·9
15	− 9·8	− 8·6	− 8·2	− 7·8	− 7·4	− 6·7	− 5·3	− 5·8	− 6·2	− 6·2	− 6·2	− 6·5	− 6·3	− 6·7
16	− 2·9	− 2·4	− 1·9	− 2·4	− 2·4	− 1·9	− 1·9	− 1·9	− 1·8	− 0·8	− 0·2	0·9	0·3	0·6
17	−12·1	−12·6	−13·1	−13·7	−15·0	−15·3	−13·7	−13·0	−12·3	−11·9	−12·1	−11·5	−12·2	−11·4
18	− 9·9	− 8·8	− 7·8	− 7·3	− 7·8	− 8·3	− 8·3	− 8·2	− 7·2	− 7·2	− 6·2	− 5·3	− 5·9	− 6·0
19	− 7·1	− 7·1	− 6·7	− 6·4	− 6·1	− 5·7	− 5·4	− 5·1	− 5·1	− 5·1	− 5·3	− 6·1	− 6·2	− 7·4
20	−12·1	−12·1	−12·0	−11·7	−12·1	−12·6	−12·9	−12·9	−12·7	−12·5	−11·7	−10·4	−11·0	− 9·8
21	−16·9	−16·8	−15·8	−15·2	−16·3	−16·1	−15·0	−15·8	−13·9	−13·1	−11·5	− 9·7	− 9·7	−10·0
22	−21·3	−21·4	−21·3	−21·7	−20·6	−19·6	−17·9	−16·3	−15·8	−14·4	−12·1	−11·6	−10·4	− 8·4
23	−10·4	−10·4	−10·2	− 9·9	− 9·7	− 9·4	− 9·3	− 8·9	− 8·8	− 8·3	− 8·1	− 7·8	− 7·7	− 7·7
24	− 8·3	− 8·3	− 8·4	− 8·3	− 8·3	− 8·4	− 8·6	− 8·7	− 9·4	− 9·5	− 9·4	− 9·1	− 8·6	− 8·6
25	− 8·3	− 8·4	− 8·4	− 7·8	− 7·6	− 7·8	− 7·9	− 8·3	− 8·6	− 8·4	− 8·6	− 8·4	− 8·8	− 8·8
26	−11·0	−11·0	−11·0	−11·1	−11·0	−10·9	−10·8	−10·6	−10·4	−10·2	−10·1	−10·0	−10·4	−10·9
27	−18·5	−18·5	−21·2	−21·3	−22·2	−21·6	−21·4	−21·8	−22·3	−22·3	−22·7	−22·4	−22·2	−23·3
28	−25·9	−24·7	−23·8	−23·0	−22·2	−21·2	−20·2	−17·9	−16·4	−16·3	−15·8	−15·2	−14·2	−14·2
29	−18·5	−19·2	−20·1	−20·3	−20·1	−18·5	−18·3	−18·4	−19·2	−20·1	−19·7	−19·2	−19·4	−20·5
30	−25·9	−26·4	−27·1	−28·1	−28·7	−29·3	−29·7	−30·8	−31·3	−31·0	−30·3	−29·7	−31·8	−32·2
Mean	−12·56	−12·56	−12·67	−12·94	−13·17	−13·11	−13·11	−13·06	−12·56	−12·22	−11·61	−11·44	**−11·33**	−11·39

December 1882. $\varphi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	−34·3	−34·3	−33·7	−32·9	−32·5	−32·1	−31·9	−31·0	−30·0	−29·0	−27·8	−27·5	−27·0	−26·8
2	−26·5	−26·1	−27·1	−28·4	−28·9	−27·9	−28·4	−28·1	−27·9	−27·5	−27·1	−26·2	−24·4	−24·8
3	−20·9	−21·8	−22·9	−23·8	−24·3	−23·1	−22·1	−23·0	−23·3	−23·3	−23·3	−23·8	−25·2	−26·8
4	−31·6	−31·7	−31·9	−31·7	−30·9	−30·6	−29·2	−28·8	−27·6	−27·1	−26·4	−25·5	−25·3	−25·4
5	−33·0	−33·3	−33·5	−34·0	−34·1	−34·0	−34·1	−34·1	−34·0	−33·5	−32·7	−31·4	−31·1	−31·4
6	−35·5	−35·5	−35·7	−34·9	−34·4	−32·1	−31·9	−30·7	−29·7	−28·9	−27·6	−26·0	−25·8	−26·5
7	−27·5	−27·9	−27·7	−26·4	−26·5	−27·1	−27·9	−28·2	−29·2	−29·2	−28·7	−27·6	−27·9	−27·7
8	−23·0	−22·9	−22·5	−22·8	−22·8	−22·9	−23·2	−23·9	−25·4	−25·6	−26·1	−26·4	−26·1	−26·4
9	−25·4	−25·4	−25·6	−26·1	−26·5	−27·0	−26·8	−26·7	−26·4	−26·0	−26·2	−25 4	−24·7	−25·4
10	−29·7	−30·3	−30·3	−30·9	−31·4	−31·6	−31·6	−32·3	−31·9	−32·0	−31·8	−31·6	−31·8	−31·9
11	−32·4	−32·4	− 31·9	−31·9	−31·9	−32·2	−32·1	−31·9	−31·8	−31·4	−31·0	−30·8	−30·9	−31·1
12	−30·8	−30·8	−31·0	−31·4	−31·6	−31·4	−31·6	−31·6	−31·6	−31·5	−30·8	−30·4	−30·4	−30·7
13	−33·2	−33·5	−33·7	−34·1	−34·6	−35·2	−35·8	−35·8	−35·7	−35·2	−34·1	−34·6	−34·4	−35·3
14	−39·1	−39·1	−37·9	−38·8	−38·1	−37·9	−37·7	−37·9	−37·5	−35·6	−33·6	−32·9	−31·2	−28·7
15	−31·2	−31·7	−31·2	−31·1	−31·1	−29·7	−28·8	−28·7	−27·9	−27·9	−27·6	−27·8	−28·3	−28·2
16	−28·2	−28·8	−29·9	−29·7	−28·1	−28·4	−29·5	−28·7	−27·5	−27·6	−26·4	−25·6	−24·7	−24·7
17	−21·4	−21·7	−21·7	−21·7	−21·7	−22·0	−22·1	−21·3	−20·8	−22·4	−22·4	−22·3	−21·6	−25·2
18	−25·5	−25·5	−26·0	−26·2	−26·8	−27·7	−27·1	−28·3	−29·7	−29·3	−28·1	−28·1	−28·7	−29·7
19	−36·0	−34·9	−35·1	−36·2	−37·3	−37·3	−36·2	−36·7	−36·8	−35·9	−35·7	−35·1	−35·1	−35·0
20	−35·9	−35·6	−34 3	−34·6	−32·4	−31·6	−32·2	−31·5	−29·7	−27·6	−27·0	−27·4	−26·5	−27·1
21	−28·0	−25·4	−24·7	−24·4	−23·8	−23·3	−23·4	−22·2	−21·2	−21·1	−21·1	−22·2	−21·4	−21·9
22	−22·3	−23·3	−21·5	−21·3	−19·8	−18·3	−16·9	−16·4	−15·3	−15·4	−15·3	−14·2	−13·1	−12·6
23	−11·6	−11·6	−11·6	−11·6	−12·0	−13·7	−13·8	−14·1	−14·2	−15·4	−17·9	−17·8	−18·5	−19·9
24	−23·8	−26·5	−27·6	−27·6	−27·1	−27·1	−28·7	−28·7	−30·1	−28·4	−26·5	−27·1	−26·4	−25·6
25	−13·5	−14·2	−13·5	−13·2	−13·4	−14·2	−16·8	−18·3	−20·1	−20·4	−17·9	−20·0	−18·6	−18·0
26	−13·6	−13·9	−16·1	−18·1	−12·6	−12·1	−11·6	−11·0	−10·4	− 9·9	− 8·3	− 9·7	− 8·9	−10·1
27	−10·9	−10·7	−10·6	− 9·9	− 8·6	− 8·3	− 8·8	− 9·4	−10·4	− 8·9	− 8·1	− 6·1	− 6·1	− 7·0
28	−16·2	−17·5	−18·6	−19·5	−20·2	−21·1	−21·3	−21·7	−22·3	−21·9	−21·2	−22·3	−22·3	−23·7
29	−28·8	−29·5	−29·7	−30·0	−29·7	−30·2	−29·8	−29·5	−29·8	−29·5	−28·3	−27·9	−28·7	−28·8
30	−23·8	−23·3	−23·9	−24·1	−24·1	−24·2	−23·2	−21·7	−20·8	−18·9	−18·5	−17·6	−18·1	−20·3
31	−31·4	−31·7	−31·5	−32·8	−33·5	−33·8	−34·6	−34·1	−34·6	−34·6	−33·1	−32·2	−31·2	−32·5
Mean	−26·61	−26·78	−26·89	**−27·11**	−26·78	−26·72	−26·72	−26·67	−26·56	−26·17	−25·50	−25·28	**−25·00**	−25·44

above the ground 1·78 m.

November 1882.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
− 9·4	− 9·6	− 8·6	− 8·1	− 7·2	− 6·7	− 6·4	− 6·2	− 5·9	− 5·3	−10·56	− 5·3	−16·1	10·8
− 4·7	− 4·7	− 4·1	− 3·9	− 4·5	− 4·3	− 4·0	− 4·2	− 5·6	− 6·7	− 4·72	− 3·9	− 6·7	2·8
−10·5	−10·4	−10·0	− 9·8	− 9·4	− 8·8	− 8·3	− 7·8	− 7·2	− 6·7	−10·00	− 6·7	−13·4	6·7
− 7·7	− 8·7	− 9·7	−10·4	−10·9	−11·0	−11·6	−12·1	−11·6	−11·6	− 7·56	− 3·9	−12·1	8·2
−12·6	−13·1	−13·7	−14·0	−14·3	−14·6	−15·4	−15·8	−15·8	−15·8	−13·17	−11·7	−15·8	4·1
−13·6	−13·8	−13·8	−14·7	−15·2	−15·7	−15·3	−15·5	−15·7	−16·1	−15·06	−12·3	−17·3	5·0
−20·1	−19·6	−19·8	−18·5	−20·7	−21·2	−20·7	−21·7	−22·5	−22·0	−20·17	−16·2	−22·5	6·3
−18·8	−18·1	−19·0	−18·2	−17·2	−16·3	−15·9	−15·8	−15·8	−15·6	−20·94	−14·8	−27·3	12·5
−13·6	−15·5	−14·5	−13·9	−13·1	−13·4	−12·9	−12·6	−12·1	−11·9	−15·06	−11·9	−18·9	7·0
− 7·3	− 6·8	− 6·6	− 6·7	− 6·7	− 6·2	− 5·6	− 5·6	− 5·3	− 5·3	− 8·39	− 4·8	−11·7	6·9
− 9·9	−10·8	−11·4	−11·9	−10·9	−11·3	−11·0	−13·2	−13·4	−13·6	− 8·83	− 1·8	−13·6	11·8
− 6·2	− 4·6	− 4·9	− 4·9	− 3·5	− 1·3	− 1·8	− 0·3	− 0·1	0·8	− 8·50	0·8	−15·6	16·4
−14·5	−15·3	−16·3	−17·1	−17·9	−19·3	−19·5	−19·8	−17·8	−16·9	−10·83	1·1	−19·8	20·9
−10·1	−10·1	−11·1	−11·4	−11·8	−11·6	−11·3	−11·2	−10·7	−10·7	−11·56	− 9·2	−15·9	6·7
− 7·3	− 7·0	− 7·1	− 7·8	− 8·3	− 8·4	− 7·2	− 5·7	− 3·8	− 3·5	− 6·83	− 3·5	− 9·8	6·3
− 0·3	− 1·2	− 2·9	− 5·0	− 5·6	− 8·7	− 9·4	−10·7	−11·6	−12·8	**− 3·61**	**1·4**	−12·8	14·2
− 9·7	−10·7	−11·6	− 9·9	−12·1	−10·7	− 9·7	− 9·7	− 9·9	−10·4	−11·83	− 9·7	−15·5	5·8
− 6·9	− 6·7	− 5·5	− 6·7	− 6·7	− 7·2	− 6·2	− 6·2	− 6·2	− 7·2	− 7·06	− 4·9	− 9·9	5·0
− 8·5	− 8·7	− 8·8	− 9·4	− 9·8	−10·4	−10·4	−10·4	−11·1	−11·8	− 7·67	− 4·9	−11·8	6·9
−12·4	−14·2	−15·2	−15·6	−14·7	−15·9	−17·4	−16·8	−17·1	−16·8	−13·44	− 9·7	−17·8	8·1
−14·8	−16·6	−17·4	−18·1	−19·0	−19·6	−20·1	−20·7	−20·9	−21·1	−16·00	− 7·2	−21·1	13·9
− 9·4	− 9·4	− 9·3	− 9·4	− 9·4	− 9·9	−10·4	−10·6	−10·4	−10·3	−13·83	− 8·0	−22·2	14·2
− 7·8	− 7·8	− 7·3	− 7·3	− 7·3	− 6·9	− 7·0	− 7·2	− 7·5	− 7·8	− 8·33	− 6·7	−10·4	3·7
− 8·2	− 8·3	− 8·4	− 8·4	− 8·3	− 8·3	− 8·3	− 8·2	− 7·8	− 7·8	− 8·50	− 7·2	− 9·7	2·5
− 9·3	− 9·4	− 9·9	− 9·9	−10·1	−10·4	−10·4	−11·3	−11·2	−10·9	− 9·11	− 7·6	−11·5	3·9
−11·1	−11·6	−12·3	−13·6	−14·5	−15·7	−15·8	−16·5	−17·6	−18·5	−12·33	−10·0	−18·5	8·5
−25·2	−26·0	−26·4	−27·1	−28·1	−27·8	−28·6	−27·7	−27·1	−26·1	−23·83	−18·5	−28·7	10·2
−14·6	−14·2	−13·7	−13·8	−14·6	−15·0	−15·5	−16·3	−17·2	−17·8	−17·67	−13·6	−25·9	12·3
−22·8	−21·7	−21·1	−22·1	−24·4	−23·8	−23·8	−24·9	−25·4	−25·7	−21·11	−18·3	−25·7	7·4
−33·1	−33·4	−33·5	−34·1	−34·9	−34·8	−34·2	−35·4	−35·4	−35·7	**−31·56**	−25·9	**−35·7**	9·8
−12·00	−12·28	−12·44	−12·72	−13·06	−13·17	−13·11	−13·33	−13·33	**−13·39**	−12·61	− 8·50	−17·12	8·62

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s.

December 1882.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
−26·3	−25·7	−24·9	−24·4	−24·8	−24·4	−25·1	−24·9	−24·9	−25·5	−28·39	−23·9	−35·2	11·3
−23·8	−22·2	−21·2	−21·1	−21·3	−20·7	−20·6	−20·6	−20·7	−20·4	−24·67	−20·4	−30·0	9·6
−27·9	−28·4	−29·1	−29·4	−30·0	−30·3	−30·3	−30·3	−30·2	−30·4	−26·00	−20·9	−30·4	9·5
−25·5	−26·0	−26·8	−28·2	−29·5	−30·8	−30·8	−31·5	−31·7	−31·9	−29·00	−25·2	−32·1	6·9
−32·4	−32·7	−33·6	−34·1	−33·6	−34·1	−34·3	−33·9	−34·2	−34·6	−33·39	−29·7	−34·6	4·9
−27·6	−27·7	−26·6	−26·7	−27·6	−27·7	−27·7	−27·4	−27·0	−27·3	−29·50	−24·4	−35·7	11·3
−27·9	−27·7	−27·3	−26·1	−25·6	−24·7	−23·9	−23·5	−23·3	−23·2	−26·78	−22·6	−29·6	7·0
−26·0	−26·3	−26·4	−27·1	−27·1	−26·2	−26·0	−25·2	−25·3	−25·9	−25·06	−22·5	−27·1	4·6
−27·1	−27·6	−28·2	−28·7	−29·0	−28·8	−29·2	−29·3	−30·1	−30·1	−27·17	−24·6	−30·1	5·5
−31·4	−30·6	−30·8	−31·7	−32·4	−32·9	−33·2	−33·4	−33·1	−32·7	−31·72	−29·7	−33·4	3·7
−31·0	−31·2	−31·3	−31·4	−31·2	−31·2	−30·9	−31·1	−30·8	−30·8	−31·44	−30·7	−32·4	1·7
−30·7	−30·5	−30·5	−30·9	−31·0	−31·3	−31·5	−31·9	−31·9	−32·5	−31·17	−30·3	−32·5	2·2
−36·1	−36·5	−36·8	−36·7	−36·9	−37·0	−37·0	−37·2	−37·6	−38·7	**−35·87**	−33·2	−38·7	5·5
−28·1	−27·6	−28·5	−28·7	−30·0	−31·2	−31·4	−31·4	−31·7	−31·7	−33·61	−27·2	−39·1	11·9
−28·2	−27·8	−27·6	−27·6	−27·6	−27·6	−27·3	−27·3	−27·8	−28·1	−28·67	−27·0	−31·7	4·7
−24·3	−24·1	−23·2	−23·3	−23·1	−22·8	−22·5	−21·6	−21·4	−21·3	−25·67	−20·9	−29·9	9·0
−25·8	−27·3	−27·4	−26·6	−26·3	−24·4	−21·8	−21·8	−23·3	−24·7	−23·22	−19·8	−27·4	7·6
−32·3	−32·9	−33·6	−33·8	−33·3	−34·1	−34·1	−34·9	−35·2	−34·7	−30·22	−25·5	−35·2	9·7
−31·7	−30·8	−30·8	−31·4	−32·4	−33·4	−33·5	−34·1	−33·0	−33·3	−34·50	−29·4	**−39·7**	10·3
−27·8	−28·1	−27·1	−28·9	−29·1	−28·6	−29·1	−30·2	−28·3	−26·5	−29·89	−26·5	−36·4	9·9
−22·9	−23·1	−22·3	−23·4	−22·7	−21·7	−21·2	−21·2	−22·8	−21·4	−22·78	−21·1	−28·0	6·9
−12·1	−11·7	−11·4	−11·3	−11·4	−11·2	−11·1	−11·1	−11·6	−11·4	−15·00	−11·1	−24·8	13·7
−20·8	−22·1	−22·9	−23·9	−24·8	−25·1	−25·6	−25·9	−25·9	−23·5	−18·50	−11·6	−25·9	14·3
−23·0	−21·4	−20·3	−18·6	−17·3	−16·3	−15·3	−14·8	−14·3	−13·8	−23·17	−13·3	−30·1	16·8
−19·8	−19·6	−20·1	−20·7	−19·0	−17·1	−15·8	−15·3	−14·6	−13·5	−17·00	−13·2	−20·7	7·5
−10·4	−10·4	−10·1	−11·1	−10·2	−12·0	−11·7	−11·3	−10·4	− 9·9	−11·39	− 7·8	−18·1	10·3
−10·0	−11·8	−13·2	−10·0	−11·7	−13·2	−14·2	−13·7	−14·7	−15·1	**−10·50**	**− 4·7**	−15·1	10·4
−25·5	−26·5	−26·4	−26·7	−27·6	−27·5	−27·3	−27·9	−28·0	−28·5	−23·39	−16·2	−28·5	12·3
−28·2	−27·1	−27·1	−26·5	−25·3	−24·3	−23·4	−23·2	−23·3	−23·5	−27·61	−23·2	−30·2	7·0
−22·4	−24·4	−26·4	−27·6	−28·2	−28·8	−30·3	−31·2	−31·4	−32·2	−24·39	−17·6	−32·2	14·6
−34·8	−35·3	−36·2	−36·7	−36·3	−36·4	−35·4	−35·1	−35·7	−35·9	−34·11	−30·9	−36·7	5·8
−25·89	−26·00	−26·06	−26·22	−26·33	−26·33	−26·17	−26·22	−26·28	−26·22	−26·22	−22·10	−30·69	8·59

January 1883. Height of the Thermometers

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	−36·0	−36·9	−37·2	−36·3	−36·7	−37·8	−37·8	−37·7	−37·4	−37·1	−36·5	−35·7	−35·3	−36·0
2	−41·1	−40·9	−40·9	−40·7	−40·7	−40·7	−40·4	−39·7	−39·9	−39·9	−39·2	−38·1	−37·6	−38·3
3	−41·4	−41·7	−42·3	−42·3	−42·3	−42·4	−42·9	−42·8	−42·8	−41·6	−41·1	−38·7	−40·1	−38·7
4	−43·4	−44·0	−43·7	−43·4	−43·4	−42·8	−42·6	−40·9	−40·9	−40·8	−40·2	−39·6	−38·7	−38·5
5	−39·3	−39·3	−39·2	−39·1	−39·3	−39·5	−39·4	−39·4	−39·5	−38·8	−37·9	−37·2	−36·4	−36·5
6	−38·8	−38·8	−39·3	−39·3	−38·8	−38·9	−38·8	−38·4	−38·5	−37·3	−36·4	−35·6	−34·7	−34·9
7	−35·7	−36·0	−35·6	−35·2	−34·8	−35·3	−34·7	−35·0	−35·2	−34·3	−33·2	−32·2	−32·3	−31·8
8	−30·6	−29·9	−29·0	−28·8	−28·7	−29·4	−30·8	−31·5	−32·9	−28·7	−28·2	−27·3	−27·1	−27·0
9	−27·2	−27·3	−27·5	−27·3	−27·3	−27·2	−27·6	−28·2	−28·9	−28·8	−28·1	−27·1	−25·3	−26·6
10	−25·9	−25·8	−26·8	−27·3	−27·6	−26·7	−26·8	−26·8	−28·3	−26·9	−25·6	−24·9	−24·4	−25·4
11	−29·8	−30·3	−29·7	−28·8	−27·7	−27·0	−27·0	−26·4	−25·8	−25·2	−24·6	−23·9	−23·6	−23·5
12	−27·1	−27·6	−28·8	−28·7	−28·3	−28·6	−28·5	−27·6	−28·2	−27·9	−27·0	−26·8	−26·0	−26·8
13	−25·9	−25·5	−25·8	−25·8	−26·1	−25·9	−26·9	−26·8	−27·3	−26·9	−26·1	−26·1	−25·9	−26·1
14	−31·7	−31·7	−30·7	−32·1	−32·4	−32·1	−33·5	−33·6	−34·1	−32·2	−30·3	−28·3	−27·1	−28·4
15	−28·9	−28·8	−28·9	−27·6	−25·5	−25·3	−25·9	−27·1	−28·5	−29·7	−30·6	−31·8	−32·6	−33·5
16	−35·3	−35·9	−31·9	−32·3	−31·2	−32·2	−32·5	−33·1	−33·5	−32·4	−30·7	−29·8	−28·9	−28·9
17	−32·6	−32·6	−32·9	−34·2	−35·6	−37·0	−37·6	−38·9	−40·0	−39·6	−37·2	−37·6	−36·9	−37·5
18	−42·9	−43·3	−44·5	−44·6	−44·0	−44·3	−43·8	−43·3	−42·3	−41·4	−39·4	−38·2	−35·6	−34·1
19	−31·1	−30·6	−30·6	−30·8	−30·6	−30·5	−29·5	−30·4	−31·3	−30·4	−28·3	−26·9	−26·2	−26·8
20	−30·6	−31·2	−31·6	−31·6	−31·7	−32·8	−31·7	−33·2	−32·6	−32·4	−31·3	−29·8	−29·7	−29·5
21	−37·6	−37·5	−38·2	−37·6	−38·1	−38·2	−38·1	−38·8	−38·4	−37·2	−36·1	−35·8	−34·7	−35·2
22	−40·2	−41·0	−41·8	−41·6	−41·6	−42·2	−41·8	−42·4	−42·3	−40·3	−39·2	−37·7	−36·8	−37·3
23	−42·8	−42·8	−42·8	−42·4	−42·3	−42·1	−42·3	−42·3	−42·0	−40·0	−38·9	−37·6	−35·8	−35·2
24	−39·3	−39·3	−39·1	−39·3	−38·8	−38·7	−37·9	−37·6	−37·0	−35·2	−33·4	−33·1	−33·4	−33·4
25	−32·6	−33·0	−34·1	−33·5	−33·6	−33·6	−33·5	−33·3	−32·5	−31·1	−29·2	−27·9	−26·8	−26·7
26	−20·7	−21·2	−21·1	−21·1	−20·2	−19·6	−19·0	−19·0	−19·0	−18·6	−17·9	−17·3	−16·7	−16·9
27	−23·8	−23·2	−22·7	−22·3	−21·7	−20·8	−20·7	−20·4	−20·2	−19·6	−18·7	−18·5	−17·4	−17·9
28	−18·5	−18·9	−19·0	−19·6	−20·0	−20·1	−20·4	−20·7	−21·1	−20·8	−20·7	−20·3	−20·8	−20·8
29	−26·7	−27·1	−28·7	−29·5	−30·8	−33·0	−33·6	−34·3	−34·9	−34·2	−33·5	−32·8	−32·1	−31·8
30	−36·4	−36·9	−37·2	−37·7	−38·2	−38·3	−38·3	−38·3	−36·7	−33·6	−30·9	−30·0	−32·2	−29·0
31	−32·6	−32·3	−32·9	−33·5	−33·7	−32·3	−31·9	−32·4	−32·1	−31·5	−31·3	−30·7	−30·1	−30·3
Mean -	−33·11	−33·28	−33·39	−33·39	−33·28	−33·39	−33·44	−33·56	−33·67	−32·72	−31·67	−30·89	−30·33	−30·44

February 1883. $\varphi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	−37·4	−37·6	−37·6	−37·6	−38·5	−39·7	−39·9	−39·6	−38·7	−36·4	−36·1	−34·7	−32·3	−32·9
2	−31·2	−32·1	−32·1	−33·1	−34·1	−35·3	−35·6	−36·6	−36·3	−34·1	−33·5	−32·2	−32·2	−30·4
3	−19·4	−17·7	−16·0	−18·9	−20·8	−21·8	−22·5	−23·6	−24·2	−24·3	−24·2	−23·4	−22·9	−22·4
4	−23·5	−23·3	−23·4	−23·3	−22·7	−22·3	−22·2	−21·3	−19·4	−16·8	−15·1	−13·6	− 8·3	− 7·2
5	−12·1	−13·6	−14·3	−14·3	−14·3	−13·9	−13·8	−13·7	−13·3	−13·2	−12·1	−12·1	−11·4	−12·1
6	−26·5	−27·3	−25·4	−26·0	−28·1	−28·1	−27·9	−28·3	−27·1	−24·6	−23·4	−22·8	−21·3	−21·3
7	− 8·3	− 7·4	−11·6	−14·3	−15·2	−17·3	−18·5	−19·6	−21·3	−20·6	−20·6	−21·2	−20·1	−20·7
8	−22·7	−22·4	−22·1	−22·1	−22·3	−22·6	−23·8	−23·8	−23·9	−23·8	−22·2	−21·7	−22·3	−22·2
9	−17·9	−19·0	−19·5	−20·4	−21·2	−19·1	−19·0	−18·5	−15·9	−14·8	−11·9	− 6·6	−10·7	−12·2
10	−34·1	−35·9	−34·1	−33·1	−34·2	−37·2	−39·4	−36·7	−35·9	−33·0	−31·3	−31·1	−30·1	−29·7
11	−21·1	−22·7	−24·4	−25·1	−25·4	−26·3	−26·5	−27·1	−27·0	−25·5	−26·4	−25·2	−24·3	−25·3
12	−29·7	−29·7	−29·7	−29·7	−29·7	−29·8	−30·3	−30·8	−29·8	−29·0	−27·1	−26·6	−25·9	−25·9
13	−33·9	−34·2	−34·2	−34·9	−35·6	−36·1	−36·6	−36·3	−34·1	−33·5	−33·2	−31·3	−29·1	−28·6
14	−35·1	−35·8	−35·5	−35·6	−37·0	−36·7	−36·7	−38·8	−34·6	−32·4	−33·0	−30·3	−29·8	−28·1
15	−36·5	−35·9	−34·9	−35·8	−33·9	−33·9	−33·6	−34·1	−29·1	−26·6	−25·9	−24·8	−22·2	−24·3
16	−32·7	−33·2	−33·0	−33·2	−33·0	−32·9	−31·5	−29·7	−28·7	−27·1	−23·3	−21·6	−19·9	−19·6
17	−19·9	−19·5	−18·9	−19·0	−18·9	−18·9	−17·9	−17·1	−17·2	−16·9	−16·6	−15·6	−15·3	−15·3
18	−26·7	−25·9	−27·1	−28·1	−27·0	−26·6	−27·4	−28·8	−25·3	−22·8	−19·8	−18·2	−18·7	−18·6
19	−22·2	−22·3	−23·3	−22·7	−22·9	−21·4	−20·8	−20·6	−19·6	−18·1	−16·7	−14·8	−14·2	−14·6
20	−15·9	−15·3	−14·2	−15·8	−13·7	−15·8	−16·7	−15·1	−12·8	−11·9	−11·6	− 8·9	− 7·8	− 4·6
21	−20·0	−19·5	−19·0	−19·6	−21·2	−22·8	−22·8	−21·8	−21·4	−19·9	−18·9	−18·3	−17·0	−16·9
22	−17·4	−19·0	−18·6	−21·7	−21·7	−19·9	−18·0	−16·9	−16·7	−17·8	−17·3	−16·7	−15·7	−15·5
23	−22·2	−22·8	−20·7	−20·3	−20·1	−20·4	−21·7	−22·3	−22·3	−22·3	−22·3	−21·9	−20·7	−20·3
24	−30·8	−29·7	−30·8	−30·8	−33·1	−33·5	−32·9	−31·7	−29·1	−28·1	−26·3	−24·8	−24·4	−22·9
25	−22·2	−22·3	−22·7	−22·9	−22·9	−22·7	−22·6	−22·2	−21·4	−20·7	−20·1	−18·8	−17·0	−16·4
26	−18·2	−17·9	−17·8	−17·9	−18·0	−17·9	−18·1	−17·7	−17·3	−17·3	−16·6	−17·4	−17·3	−16·6
27	−23·6	−23·7	−23·8	−23·9	−24·3	−24·4	−24·5	−24·3	−24·0	−23·4	−23·0	−22·7	−20·7	−20·3
28	−21·2	−21·7	−22·0	−22·7	−23·2	−23·4	−23·9	−23·8	−23·3	−22·9	−23·7	−23·3	−23·3	−23·1
Mean -	−24·39	−24·56	−24·50	−25·11	−25·44	−25·72	−25·89	−25·78	−24·67	−23·50	−22·56	−21·44	−20·50	−20·28

above the ground 1·78 m.

January 1883

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
−37·9	−37·9	−37·9	−39·8	−40·2	−40·6	−41·6	−41·1	−42·3	−42·3	−38·17	−35·0	−43·5	8·5
−39·5	−40·2	−40·7	−40·5	−40·5	−40·5	−40·8	−41·1	−40·8	−40·8	−40·17	−37·6	−41·1	3·5
−41·7	−42·2	−41·7	−42·3	−42·3	−42·6	−42·7	−43·3	−42·8	−43·7	−41·94	−38·7	−43·7	5·0
−39·1	−39·3	−39·7	−39·9	−39·7	−39·8	−39·6	−39·5	−39·4	−39·4	−40·78	−38·5	−44·0	5·5
−37·2	−37·3	−38·1	−38·7	−38·8	−38·8	−38·6	−39·1	−38·5	−38·8	−38·56	−34·9	−39·5	4·6
−35·0	−34·5	−34·7	−35·8	−35·9	−35·7	−35·6	−35·4	−35·3	−35·7	−36·78	−33·6	−39·3	5·7
−32·3	−32·1	−32·3	−32·4	−32·6	−33·1	−33·3	−32·9	−32·3	−31·4	−33·56	−31·4	−36·0	4·6
−27·1	−27·1	−27·3	−27·2	−28·7	−29·1	−28·8	−28·2	−27·8	−27·2	−28·67	−26·6	−32·9	6·3
−28·7	−28·2	−29·6	−28·2	−28·8	−29·2	−29·3	−28·8	−27·9	−26·6	−27·89	−24·0	−29·6	5·6
−27·8	−27·8	−28·0	−29·4	−29·4	−29·4	−29·3	−28·2	−28·3	−29·2	−27·33	−21·9	−29·4	7·5
−23·3	−23·5	−23·6	−23·2	−23·6	−24·1	−24·1	−23·5	−25·8	−26·8	−25·61	−23·2	−30·4	7·2
−27·6	−27·6	−27·6	−27·7	−27·9	−27·6	−26·8	−26·4	−26·3	−26·3	−27·50	−25·4	−28·8	3·4
−26·0	−26·4	−26·2	−26·4	−27·0	−27·1	−26·7	−30·6	−29·9	−31·4	−26·89	−25·0	−31·4	6·4
−31·3	−33·5	−32·8	−32·3	−31·4	−32·4	−32·2	−31·4	−30·7	−29·7	−31·50	−27·1	−34·1	7·0
−34·2	−35·1	−35·7	−35·9	−36·1	−36·4	−36·4	−35·8	−35·8	−35·8	−31·78	−24·4	−36·4	12·0
−33·2	−33·7	−33·3	−33·9	−31·7	−31·7	−32·2	−32·9	−32·4	−32·3	−32·33	−27·4	−35·9	8·5
−39·3	−41·1	−41·7	−42·3	−42·3	−42·4	−42·3	−42·9	−43·4	−43·4	−38·78	−32·6	−43·4	10·8
−34·7	−34·7	−34·8	−35·7	−34·4	−33·4	−32·3	−31·7	−31·9	−31·3	−38·22	−31·3	**−44·6**	13·3
−27·9	−28·2	−28·8	−29·7	−30·6	−30·0	−30·3	−30·7	−31·2	−30·6	−29·67	−26·1	−31·3	5·2
−31·4	−33·5	−33·5	−33·5	−35·0	−34·7	−36·0	−36·4	−36·7	−37·6	−32·83	−29·3	−37·6	8·3
−35·4	−36·9	−37·3	−38·9	−38·6	−38·4	−39·2	−39·3	−39·3	−39·9	−37·67	−34·1	−39·9	5·8
−40·9	−41·4	−42·0	−42·8	−41·7	−41·8	−42·4	−43·1	−43·4	−42·8	−41·17	−35·7	−43·4	7·7
−37·3	−39·9	−39·7	−39·7	−40·1	−39·6	−40·1	−40·2	−39·9	−39·3	−40·22	−33·6	−42·8	9·2
−33·5	−33·9	−33·5	−33·2	−32·8	−32·3	−29·5	−28·2	−27·9	−32·4	−34·72	−27·2	−39·5	12·3
−26·3	−25·6	−24·9	−24·0	−23·2	−22·8	−23·3	−21·5	−21·2	−21·1	−28·11	−21·1	−34·9	13·8
−16·7	−17·2	−19·6	−20·5	−21·7	−22·3	−24·9	−23·8	−23·7	−23·1	−20·06	**−15·6**	−24·9	9·3
−17·9	−17·4	−17·4	−17·5	−17·8	−17·9	−18·1	−18·5	−18·2	−18·3	**−19·44**	−17·4	−23·8	6·4
−20·7	−21·3	−21·6	−21·8	−21·7	−22·3	−22·7	−24·5	−25·4	−27·4	−21·28	−18·5	−27·4	8·9
−32·7	−35·3	−34·6	−35·8	−36·1	−35·1	−34·5	−33·6	−34·2	−35·7	−32·94	−26·7	−36·1	9·4
−31·9	−33·6	−33·9	−32·4	−32·4	−33·4	−33·0	−33·8	−33·5	−33·9	−34·39	−28·2	−38·3	10·1
−31·2	−31·9	−32·4	−33·4	−34·7	−35·0	−35·3	−35·7	−36·4	−36·5	−32·94	−29·7	−36·5	6·8
−31·61	−32·22	−32·39	−32·72	−32·83	−32·89	−32·94	−33·00	−33·00	−33·28	−32·67	−28·45	−36·14	7·69

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s.

February 1883.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
−33·6	−33·7	−33·5	−33·5	−33·0	−32·9	−32·3	−32·3	−31·9	−31·7	**−35·33**	−30·8	**−39·9**	9·1
−31·9	−34·2	−33·6	−32·9	−32·1	−32·2	−31·2	−27·3	−24·7	−21·9	−32·11	−21·9	−36·6	14·7
−24·6	−27·3	−28·2	−27·6	−24·6	−26·9	−27·1	−27·2	−25·3	−24·7	−23·56	−15·9	−28·6	12·7
− 7·1	− 8·3	− 8·1	−10·0	− 9·4	− 8·8	− 9·2	− 9·9	−11·0	−11·3	−14·83	− 5·3	−23·5	18·2
−14·7	−15·3	−14·9	−19·2	−20·8	−22·4	−23·3	−24·4	−24·4	−25·2	−16·22	−11·4	−25·2	13·8
−20·7	−19·8	−20·8	−20·9	−19·1	−19·8	− 9·2	− 7·0	− 6·7	− 7·3	−21·22	− 6·6	−28·6	22·0
−22·2	−23·4	−25·4	−25·7	−27·1	−28·1	−28·1	−26·9	−23·6	−22·7	−20·39	− 7·4	−28·7	21·3
−22·3	−22·8	−23·8	−20·6	−19·4	−18·5	−18·8	−17·0	−16·9	−17·4	−21·50	−15·9	−23·9	8·0
−13·1	−14·2	−17·9	−19·7	−23·4	−25·2	−27·1	−28·7	−30·2	−34·1	−19·17	− 6·5	−34·1	27·6
−28·8	−28·6	−28·1	−27·9	−27·7	−27·6	−26·5	−25·2	−23·9	−22·8	−30·94	−22·8	−39·4	16·6
−26·1	−25·9	−26·7	−27·8	−28·7	−27·9	−28·6	−29·4	−29·1	−29·2	−26·33	−21·1	−29·4	8·3
−26·6	−28·0	−27·6	−27·5	−27·8	−28·1	−29·2	−30·9	−32·6	−33·2	−28·94	−25·7	−33·2	7·5
−29·7	−31·0	−31·9	−32·7	−33·5	−33·9	−34·3	−34·6	−34·6	−30·8	−33·44	−27·8	−36·6	8·8
−28·7	−30·3	−33·2	−33·6	−33·0	−33·3	−34·1	−34·5	−36·0	−35·6	−33·83	−26·6	−38·8	12·2
−24·5	−26·4	−28·7	−30·2	−30·6	−31·4	−30·7	−33·0	−32·4	−32·4	−30·50	−22·1	−36·5	14·4
−20·0	−19·8	−20·6	−20·5	−20·2	−19·5	−18·6	−19·6	−20·0	−20·2	−24·94	−18·6	−33·4	14·8
−16·3	−16·6	−18·5	−20·8	−21·8	−23·2	−24·8	−27·7	−29·2	−28·6	−19·78	−15·1	−29·2	14·1
−19·0	−19·1	−20·5	−22·1	−22·6	−22·6	−22·1	−21·5	−21·2	−22·3	−23·06	−17·1	−28·8	11·7
−15·2	−17·3	−18·5	−19·6	−19·8	−17·4	−16·3	−16·3	−15·7	−15·9	−18·61	−12·6	−24·3	11·7
− 7·1	−10·5	−12·7	−13·7	−15·3	−14·9	−16·4	−19·4	−17·9	−20·2	**−13·67**	**− 3·5**	−20·2	16·7
−17·4	−16·2	−15·5	−14·6	−13·4	−13·2	−13·4	−15·7	−16·8	−17·2	−18·00	−13·2	−22·8	9·6
−15·3	−15·4	−15·9	−15·7	−15·3	−15·3	−16·3	−17·3	−18·3	−20·1	−17·44	−15·3	−23·5	8·2
−20·6	−21·7	−24·3	−25·3	−26·4	−27·7	−26·4	−27·6	−28·6	−30·3	−23·28	−20·1	−30·3	10·2
−23·1	−24·9	−25·7	−25·3	−25·0	−25·1	−25·1	−24·9	−23·8	−22·7	−27·28	−21·6	−33·5	11·9
−17·3	−18·4	−18·5	−18·7	−18·1	−17·7	−17·8	−17·9	−18·1	−18·1	−19·83	−16·4	−22·9	6·5
−17·2	−18·4	−18·8	−20·0	−21·2	−21·6	−22·3	−22·6	−23·1	−23·6	−18·94	−16·6	−23·6	7·0
−20·6	−20·7	−21·2	−21·4	−21·4	−21·3	−21·2	−21·5	−21·7	−21·2	−22·44	−20·3	−24·8	4·5
−23·3	−23·2	−23·3	−24·2	−26·0	−27·7	−29·7	−30·3	−29·8	−29·7	−24·56	−21·2	−30·3	9·1
−20·94	−21·83	−22·72	−23·28	−23·44	−23·72	−23·56	−23·94	−23·83	−24·11	−23·56	−17·12	−29·66	12·54

March 1883. Height of the Thermometers

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	−30·3	−31·9	−32·7	−33·2	−32·8	−32·7	−33·5	−32·4	−31·9	−29·8	−29·7	−26·4	−25·7	−24·9
2	−25·0	−25·7	−26·1	−28·1	−28·1	−28·2	−27·8	−26·7	−25·2	−23·8	−22·7	−23·3	−23·4	−22·8
3	−30·2	−29·7	−30·3	−31·0	−31·6	−33·0	−33·3	−30·6	−29·3	−27·1	−26·3	−25·1	−24·6	−22·8
4	−34·6	−33·4	−35·1	−34·1	−34·7	−35·1	−35·1	−34·5	−33·5	−31·9	−30·3	−28·6	−27·7	−26·5
5	−31·9	−34·1	−34·2	−34·1	−34·6	−35·2	−35·6	−32·1	−31·7	−28·9	−24·9	−23·2	−22·8	−22·3
6	−31·4	−31·9	−31·7	−31·9	−32·2	−31·9	−30·9	−29·3	−27·4	−26·2	−25·0	−23·2	−21·6	−21·1
7	−22·8	−23·8	−24·4	−23·9	−23·8	−23·8	−22·9	−21·2	−19·1	−18·4	−18·0	−17·9	−17·4	−17·5
8	−23·7	−20·5	−17·9	−17·9	−18·4	−19·0	−17·5	−17·4	−16·7	−15·8	−14·8	−14·2	−13·1	−12·5
9	−21·3	−24·5	−24·4	−23·9	−24·3	−24·4	−25·0	−22·8	−22·0	−19·6	−17·3	−15·7	−14·4	−14·7
10	−20·2	−20·3	−20·2	−20·0	−20·1	−19·6	−19·8	−19·1	−19·0	−17·9	−16·8	−15·7	−14·7	−14·3
11	−12·1	−15·6	−15·8	−16·9	−15·2	−15·3	−14·7	−14·2	−13·1	−13·7	−13·4	−13·3	−12·9	−12·7
12	−19·1	−17·9	−17·9	−18·3	−19·0	−18·7	−18·2	−17·9	−16·9	−16·3	−15·2	−13·7	−13 3	−13·3
13	−14·1	−12·7	−13·1	−14·2	−16·4	−16·3	−17·0	−15·4	−14·6	−13·1	−11·9	−11·1	−10·2	−10·3
14	−25·5	−26·5	−27·1	−27·6	−28·3	−29·1	−27·5	−23·3	−20·7	−21·7	−22·2	−21·9	−20·2	−20·6
15	−25·7	−24·9	−28·1	−28·1	−28·6	−28·1	−26·0	−24·8	−23·0	−21·7	−20·2	−19·0	−17·3	−17·0
16	−18·0	−17·9	−17·9	−18·2	−18·8	−20·0	−20·5	−21·2	−20·8	−20·7	−20·9	−20·6	−21·2	−22·2
17	−36·7	−37·0	−38·4	−39·3	−39·3	−39·9	−38·1	−36·2	−34·9	−33·3	−30·3	−29·1	−27·7	−25·7
18	−28·7	−30·7	−30·3	−30·5	−31·9	−31·4	−28·4	−25·4	−24·8	−23·1	−22·3	−19·1	−17·8	−18·5
19	−30·1	−29·3	−30·1	−28·1	−27·2	−26·8	−24·6	−22·9	−21·7	−19·6	−18·8	−17·4	−16·4	−15·8
20	−16·4	−16·4	−17·5	−18·5	−18·6	−18·1	−16·6	−15·5	−13·4	−13·6	−12·2	−11·0	−10·4	−10·4
21	−22·8	−22·4	−24·4	−25·7	−26·3	−26·5	−24·4	−21·9	−20·2	−19·0	−18·3	−17·1	−14·3	−13·1
22	−19·0	−20·0	−22·8	−23·4	−25·0	−22·7	−19·6	−19·1	−17·8	−17·6	−16·4	−15·2	−14·6	−14·1
23	−29·1	−29·7	−30·3	−30·7	−30·8	−31·4	−32·3	−26·9	−25·1	−25·4	−23·7	−22·4	−20·8	−20·0
24	−31·9	−31·4	−31·9	−32·2	−33·5	−33·1	−29·7	−27·1	−26·7	−26·4	−24·8	−22·9	−22·8	−21·4
25	−28·7	−29·7	−30·4	−31·6	−30·8	−31·8	−29·2	−29·3	−27·1	−25·3	−22·8	−20·7	−19·6	−19·0
26	−26·2	−27·1	−27·6	−26·6	−28·6	−29·7	−27·9	−26·4	−23·4	−22·4	−21·0	−19·3	−19·7	−19·0
27	−23·3	−23·8	−24·4	−24·4	−24·4	−24·4	−22·8	−22·3	−20·7	−18·4	−17·4	−16·3	−14·9	−13·2
28	−22·8	−22·8	−23·8	−25·9	−24·9	−24·0	−22·3	−21·7	−19·6	−17·8	−15·7	−13·3	−11·1	−10·2
29	−21·7	−22·1	−21·2	−21·8	−22·7	−23·3	−19·0	−17·9	−15·8	−14·6	−13·5	−12·9	−11·6	−10·5
30	−21·2	−23·9	−24·8	−26·0	−24·5	−27·3	−25·0	−19·4	−17·3	−17·4	−16·3	−14·4	−13·1	−12·6
31	−24·9	−26·3	−26·5	−26·3	−27·4	−24·8	−24·3	−21·7	−16·3	−15·8	−15·3	−13·8	−11·6	−10·4
Mean -	−24·83	−25·28	−25·83	−26·22	−26·56	**−26·61**	−25·44	−23·78	−22·22	−21·17	−19·94	−18·61	−17·61	**−17·06**

April 1883. $\varphi = +\ 62°\ 38'\ 52''$

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	−20·7	−17·9	−16·3	−17·4	−16·6	−15·8	−15·2	−16·4	−14·5	−14·2	−13·1	−10·8	− 9·1	− 8·4
2	−17·4	−19·0	−19·3	−18·5	−18·5	−19·1	−16·9	−15·3	−13·2	−11·8	−10·7	− 9·3	− 8·8	− 8·3
3	−11·3	−11·1	−12·1	−12·9	−13·7	−14·4	−14·2	−14·2	−13·7	−12·9	−11·9	−11·1	−11·0	−10·5
4	−22·4	−21·8	−23·3	−22·8	−22·7	−20·4	−19·3	−17·2	−14·2	−12·4	−14·2	−10·9	−10·4	−10·1
5	−20·1	−20·7	−21·7	−22·9	−22·8	−23·0	−22·0	−20·1	−19·7	−17·0	−15·2	−13·4	−12·8	−11·6
6	−16·9	−17·3	−17·7	−16·9	−16·4	−15·8	−14·1	−11·6	−11·6	−12·4	−10·0	− 9·4	− 7·8	− 8·3
7	−19·1	−20·1	−20·7	−21·3	−22·3	−20·1	−17·8	−16·3	−14·3	−11·2	− 9·2	− 8·4	− 7·5	− 6·2
8	−15·8	−17·4	−18·0	−18·9	−19·3	−18·3	−16·8	−16·4	−15·1	−14·2	−13·6	−12·6	−11·7	−10·5
9	−16·3	−15·8	−15·7	−15·6	−15·1	−14·3	−13·6	−12·6	−11·3	− 8·9	− 7·1	− 6·9	− 5·6	− 5·6
10	−11·0	−12·1	−13·6	−14·7	−15·6	−14·8	−14·3	−13·2	−12·2	−10·9	− 9·2	− 7·8	− 7·8	− 7·3
11	−13·6	−13·1	−13·1	−12·0	−11·9	−11·2	−10·3	− 9·4	− 8·3	− 6·7	− 6·1	− 5·1	− 3·5	− 3·2
12	−11·3	−11·1	−12·1	−13·2	−12·5	−11·6	− 9·9	− 7·5	− 6·2	− 6·2	− 3·5	− 2·9	− 2·1	− 2·3
13	− 9·9	−10·5	−11·0	−11·2	−11·6	−11·1	− 9·9	− 8·9	− 7·8	− 6·3	− 5·5	− 4·6	− 2·9	− 3·1
14	−14·2	−14·8	−15·8	−17·1	−16·4	−16·9	−16·6	−14·9	−13·2	−11·2	− 9·9	− 8·7	− 7·2	− 5·9
15	−11·3	−10·4	−10·4	−10·8	−11·2	−11·0	−10·0	− 9·3	− 7·2	− 6·1	− 5·1	− 3·3	− 2·0	− 0·2
16	−12·9	−14·5	−14·7	−15·8	−16·3	−15·2	−14·2	−11·6	− 9·4	− 8·2	− 6·5	− 4·2	− 3·2	− 1·2
17	−11·0	−14·2	−13·1	−14·9	−15·4	−14·2	−12·1	− 9·8	− 8·4	− 7·1	− 5·2	− 3·0	− 1·9	0·7
18	− 9·6	−10·9	−10·4	−12·1	−13·1	−10·8	− 9·9	− 9·8	− 8·3	− 5·7	− 4·1	− 3·9	− 3·5	− 2·3
19	−10·0	−10·6	−11·3	−12·0	−11·2	−10·4	− 8·3	− 7·8	− 6·8	− 4·5	− 3·6	− 2·3	− 0·4	0·3
20	− 8·1	− 7·5	− 9·3	−10·0	− 9·8	− 7·8	− 6·8	− 4·4	− 1·6	− 1·3	1·2	2·4	2·8	2·7
21	0·3	0·3	0·3	0·3	0·2	0·2	0·6	0·8	0·8	0·9	1·3	0·8	0·8	0·8
22	0·7	0·6	0·6	0·4	− 0·1	− 0·3	− 1·1	− 1·9	− 2·1	− 2·2	− 2·1	− 1·8	− 0·8	− 1·1
23	− 5·7	− 6·5	− 7·2	− 7·8	− 7·9	− 7·6	− 6·9	− 6·1	− 5·3	− 4·5	− 3·9	− 2·9	− 2·3	− 2·5
24	− 7·8	− 7·2	− 7·1	− 7·2	− 7·7	− 6·5	− 5·0	− 3·5	− 1·3	− 0·6	1·3	1·8	2·9	2·4
25	− 2·4	− 2·7	− 2·9	− 3·6	− 4·6	− 1·9	− 1·9	− 0·2	1·8	3·0	3·1	3·2	3·6	3·6
26	− 1·9	− 2·4	− 1·9	− 3·7	− 2·3	− 1·2	2·1	3·0	3·8	4·4	5·1	5·2	4·7	5·1
27	0·1	− 1·2	− 2·2	− 2·9	− 1·9	− 1·3	− 0·3	0·8	2·3	3·6	3·6	3·6	3·7	4·4
28	− 0·2	− 0·1	− 0·1	− 0·1	0·1	0·4	0·8	1·4	1·9	1·2	1·2	2·0	3·0	3·4
29	1·4	1·3	0·7	1·7	− 0·6	− 1·0	− 0·7	− 0·3	0·3	1·8	2·3	2·5	2·7	3·1
30	− 3·6	− 3·5	− 4·0	− 4·6	− 4·5	− 5·2	− 4·6	− 4·0	− 2·9	− 2·7	− 1·8	− 0·7	− 0·3	− 0·2
Mean -	−10·06	−10·39	−10·78	−11·28	**−11·39**	−10·67	− 9·67	− 8·56	− 7·28	− 6·11	− 5·06	− 4·11	− 3·28	− 2·72

above the ground 1·78 m.

March 1883.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
−25·2	−26·3	−24·9	−24·3	−24·8	−23·9	−22·8	−24·1	−24·4	−25·2	−28·06	−22·4	−33·5	11·1
−24·1	−25·4	−26·9	−27·1	−27·9	−28·8	−28·2	−28·6	−28·7	−29·1	−26·33	−22·7	−29·1	6·4
−23·0	−23·8	−27·3	−28·4	−29·7	−30·9	−31·8	−32·1	−33·3	−31·4	−29·00	−22·8	−33·3	10·5
−25·3	−27·1	−27·9	−28·1	−29·1	−29·8	−29·7	−30·3	−31·1	−30·9	−31·00	−25·3	−36·1	10·8
−22·0	−23·9	−25·6	−28·2	−29·5	−29·8	−29·7	−30·3	−32·4	−33·0	−29·61	−21·6	−35·6	14·0
−20·8	−20·8	−21·6	−20·4	−20·7	−19·2	−19·0	−20·1	−20·8	−22·6	−25·06	−18·9	−33·2	14·3
−17·9	−18·0	−17·5	−17·0	−17·2	−18·1	−18·4	−19·0	−20·5	−21·8	−20·00	−16·0	−24·4	8·4
−12·4	−12·6	−13·2	−17·2	−18·3	−19·0	−20·2	−20·8	−20·1	−21·7	−17·28	−12·4	−23·7	11·3
−15·1	−15·4	−17·3	−18·4	−20·7	−20·2	−20·1	−19·6	−19·9	−20·1	−20·06	−14·4	−25·3	10·9
−13·8	−14·1	−13·4	−12·6	−12·1	−11·4	−11·0	−12·1	−13·1	−11·1	−15·94	−11·0	−22·5	11·5
−13·1	−13·3	−14·3	−16·3	−17·0	−17·8	−19·4	−17·4	−18·5	−19·6	**−15·22**	−12·1	−19·6	7·5
−14·3	−13·3	−13·8	−14·2	−14·2	−14·2	−15·2	−15·6	−15·3	−15·2	−15·89	−12·7	−20·1	7·4
−11·1	−13·8	−16·3	−16·8	−21·3	−22·4	−23·7	−24·5	−24·8	−25·1	−16·28	−10·2	−25·1	14·9
−20·2	−20·7	−21·2	−22·8	−23·8	−24·6	−25·3	−25·2	−25·6	−26·5	−24·11	−19·7	−29·1	9·4
−15·8	−16·3	−16·1	−16·3	−16·3	−16·3	−16·9	−17·0	−17·5	−17·9	−20·78	−15·5	−28·9	13·4
−22·8	−23·4	−25·1	−27·6	−29·2	−30·8	−31·9	−33·1	−34·2	−35·4	−23·83	−17·9	−35·4	17·5
−25·3	−24·6	−24·4	−27·2	−30·0	−30·8	−30·8	−30·3	−30·2	−29·2	**−32·06**	−24·4	**−39·9**	15·5
−18·1	−19·4	−19·0	−22·2	−23·8	−24·9	−26·9	−28·7	−29·7	−30·6	−25·28	−17·2	−31·9	14·7
−16·3	−14·8	−15·7	−17·2	−17·8	−16·3	−16·0	−16·1	−16·7	−16·5	−20·50	−12·8	−30·6	17·8
−11·0	−12·2	−13·1	−15·5	−17·0	−19·6	−20·1	−19·5	−19·7	−20·1	−15·67	−10·4	−20·1	9·7
−15·3	−15·7	−15·8	−17·9	−19·6	−20·1	−22·0	−20·1	−21·7	−21·2	−20·22	−12·1	−26·8	14·7
−14·7	−15·3	−16·2	−18·8	−20·6	−21·8	−23·3	−26·3	−27·6	−28·5	−20·00	−14·1	−28·5	14·4
−19·6	−19·2	−19·4	−21·6	−24·4	−25·1	−25·2	−26·9	−30·8	−31·0	−25·89	−19·2	−32·3	13·1
−21·6	−21·7	−21·4	−21·7	−26·1	−26·4	−26·5	−27·6	−27·6	−27·6	−26·83	−21·2	−33·9	12·7
−18·9	−18·6	−19·1	−19·1	−22·8	−24·1	−25·5	−24·8	−25·9	−25·9	−25·06	−18·6	−32·1	13·5
−18·9	−19·2	−17·3	−19·6	−21·1	−22·3	−23·5	−23·8	−22·8	−23·2	−23·17	−16·2	−29·7	13·5
−13·6	−14·2	−13·8	−16·3	−17·9	−20·6	−19·6	−20·8	−20·6	−21·6	−19·56	−13·0	−25·3	12·3
− 9·1	− 8·3	− 8·3	−12·6	−13·1	−16·3	−18·8	−17·4	−18·0	−21·3	−17·44	**− 8·3**	−25·9	17·6
−10·3	−10·7	−11·4	−14·1	−15·1	−15·8	−16·3	−18·6	−19·6	−21·7	−16·78	−10·3	−23·3	13·0
−13·3	−13·4	−13·7	−14·3	−15·2	−15·3	−20·7	−18·4	−18·5	−21·7	−18·67	−12·3	−27·9	15·6
−10·1	− 8·8	− 9·2	−11·6	−13·2	−15·4	−15·7	−16·4	−21·0	−19·8	−17·78	− 8·6	−27·4	18·8
−17·22	−17·56	−18·06	−19·50	−20·94	−21·67	−22·39	−22·72	−23·56	−24·06	−22·06	−15·95	−28·73	12·78

λ = − 115° 43′ 50″ = − 7h. 42m. 55s.

April 1883.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
− 9·6	− 9·4	−10·3	−11·4	−12·6	−13·9	−14·8	−15·9	−17·3	−16·9	−14·11	− 8·4	−21·2	12·8
− 9·0	−10·0	−10·7	−11·0	−10·5	−11·3	−10·9	−10·9	− 9·9	−11·4	−13·00	− 8·3	−21·5	13·2
−10·4	−11·4	−11·7	−13·0	−15·9	−17·4	−18·1	−19·6	−20·6	−20·2	−13·89	−10·2	−20·6	10·4
− 9·2	−10·1	−10·4	−12·6	−16·8	−16·7	−17·9	−18·3	−19·5	−21·2	−16·44	− 9·2	**−23·7**	14·5
−11·4	−12·0	−11·9	−13·1	−13·4	−13·1	−12·9	−16·1	−16·2	−16·3	**−16·67**	−11·1	−23·4	12·3
− 8·8	− 8·9	−10·9	−11·6	−12·1	−13·0	−13·8	−14·7	−15·2	−17·9	−13·06	− 6·8	−17·9	11·1
− 4·6	− 4·7	− 7·2	− 8·2	− 9·1	− 9·9	−10·6	−12·0	−13·1	−14·4	−12·83	− 4·2	−22·8	18·6
−10·3	−10·2	−11·0	−12·3	−13·8	−14·7	−15·6	−15·9	−16·8	−16·8	−14·83	− 9·7	−19·9	10·2
− 2·4	− 3·5	− 4·1	− 4·6	− 6·7	− 9·4	− 8·3	− 9·4	− 9·1	− 9·3	− 9·61	− 2·2	−17·0	14·8
− 7·3	− 7·3	− 7·7	− 8·5	−10·1	−11·9	−12·7	−13·1	−12·4	−13·4	−11·22	− 7·1	−16·6	9·5
− 2·4	− 2·9	− 3·7	− 3·9	− 4·6	− 5·6	− 8·3	− 8·3	− 9·4	−12·5	− 7·89	− 2·1	−14·8	12·7
− 1·9	− 0·9	− 1·4	− 2·9	− 5·0	− 6·9	− 8·7	− 8·1	− 7·8	− 8·9	− 6·89	− 0·9	−13·4	12·5
− 2·9	− 3·2	− 3·9	− 4·5	− 6·2	− 8·3	− 9·7	−11·0	−14·2	−13·7	− 8·00	− 2·9	−14·2	11·3
− 4·5	− 5·3	− 5·4	− 7·8	− 9·5	−10·8	−11·9	−12·6	−11·4	−12·2	−11·44	− 4·3	−17·5	13·2
0·1	− 0·8	− 1·4	− 1·9	− 2·9	− 4·6	− 5·7	− 6·8	−11·0	−10·5	− 6·39	0·1	−11·3	11·4
1·0	0·7	0·1	− 0·3	− 2·0	− 2·9	− 4·3	− 5·7	− 7·2	− 8·9	− 7·39	1·3	−17·2	18·5
1·3	0·9	0·7	0·2	− 2·5	− 3·4	− 5·4	− 5·0	− 8·3	− 8·8	− 6·67	2·1	−15·6	17·7
− 1·3	− 1·2	− 2·4	− 4·1	− 6·4	− 7·8	− 6·7	− 5·6	− 6·7	− 8·4	− 6·89	− 0·9	−15·7	14·8
0·7	0·6	− 0·7	− 1·7	− 3·7	− 5·2	− 6·3	− 7·2	− 8·7	− 8·3	− 5·83	0·7	−12·3	13·0
2·9	2·1	0·6	0·2	0·3	0·3	0·3	0·3	0·3	0·3	− 2·06	3·0	−10·3	13·3
1·3	1·0	0·8	0·8	1·2	0·7	0·7	0·3	0·6	0·5	0·67	1·4	− 1·7	3·1
− 0·8	− 0·8	− 1·4	− 2·4	− 3·6	− 3·6	− 4·1	− 4·1	− 4·5	− 4·6	− 1·72	0·7	− 4·6	5·3
− 2·2	− 2·2	− 2·4	− 2·9	− 4·1	− 5·9	− 6·2	− 7·2	− 8·1	− 8·1	− 5·28	− 1·3	− 8·2	6·9
1·6	1·3	1·3	0·8	− 0·1	− 0·2	− 0·6	− 0·8	− 0·8	− 1·3	− 1·83	2·9	− 8·3	11·2
2·4	2·7	3·6	1·6	0·4	− 0·2	− 0·3	− 2·2	− 0·9	− 0·9	0·17	4·4	− 4·8	9·2
5·7	7·4	6·4	6·3	3·6	3·0	1·0	− 1·3	− 1·1	− 1·1	**2·06**	**7·4**	− 3·9	11·3
4·3	3·3	2·3	1·6	0·3	− 0·7	− 0·3	− 0·3	0·2	0·3	0·94	4·7	− 3·4	8·1
3·4	2·9	2·2	2·4	2·4	2·1	1·3	0·1	0·9	1·4	1·44	3·6	− 0·8	4·4
3·3	3·1	2·4	1·2	0·3	1·0	− 1·7	− 2·1	− 2·3	− 2·8	0·67	3·5	− 2·8	6·3
− 0·1	− 0·1	− 0·2	− 0·8	− 2·3	− 4·2	− 5·3	− 5·1	− 6·1	− 6·3	− 3·06	0·5	− 6·3	6·8
− 2·39	− 2·61	− 3·28	− 4·17	− 5·50	− 6·56	− 7·28	− 7·94	− 8·56	− 9·11	− 7·06	− 1·78	−13·06	11·28

May 1883. Height of the Thermometers

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	− 5·4	− 5·0	− 5·7	− 6·3	− 5·9	− 4·6	− 4·5	− 2·8	− 0·4	− 0·2	0·9	2·2	4·0	3·6
2	− 1·3	− 0·3	0·7	0·4	− 2·0	− 4·4	− 3·6	− 3·5	− 2·9	− 2·4	− 0·9	− 1·2	− 1·3	− 0·8
3	−10·3	−11·9	−12·9	−13·6	−13·1	−12·9	−12·4	−11·6	−10·6	−10·3	− 9·4	− 9·8	− 8·8	− 8·7
4	−16·8	−17·4	−17·5	−17·4	−15·8	−14·8	−13·9	−12·9	−12·0	−11·2	− 9·9	− 8·7	− 8·5	− 8·4
5	−13·2	−12·8	−12·8	−12·4	−11·3	−10·2	− 8·8	− 7·3	− 4·3	− 2·7	− 1·1	0·3	0·9	1·1
6	− 6·4	− 6·8	− 8·3	− 9·9	− 7·7	− 7·2	− 6·7	− 5·6	− 4·6	− 3·4	− 1·4	− 1·1	− 0·8	0·2
7	−10·4	−11·1	−11·6	−11·4	−10·4	− 8·9	− 7·9	− 6·3	− 5·0	− 3·5	− 2·6	− 2·1	− 1·0	− 1·2
8	− 8·2	− 8·8	− 8·9	− 8·7	− 8·3	− 7·3	− 6·2	− 5·1	− 4·1	− 2·6	− 1·5	− 0·3	− 0·3	1·1
9	− 7·2	− 7·9	− 8·8	− 8·8	− 7·8	− 6·2	− 4·6	− 3·6	− 2·9	− 2·7	− 1·2	− 0·3	0·3	0·8
10	− 0·3	− 0·6	− 1·3	− 1·3	− 0·8	− 0·6	0·6	0·9	2·3	3·7	4·5	4·7	5·2	5·3
11	− 2·2	− 2·3	− 3·6	− 2·4	− 0·9	0·4	1·3	1·9	2·9	3·6	4·3	4·7	5·2	5·6
12	− 4·5	− 2·9	− 2·4	− 3·3	− 1·1	1·2	2·4	3·6	4·1	5·1	5·2	6·2	6·7	6·3
13	2·4	1·2	0·2	− 0·8	− 0·4	0·6	1·9	2·8	3·7	4·9	5·2	7·4	6·8	6·3
14	− 0·2	− 1·2	− 2·2	− 1·6	1·1	1·9	3·6	4·0	4·6	5·7	7·8	7·9	8·3	6·9
15	0·3	− 0·3	− 0·4	− 0·9	− 0·5	0·3	1·4	2·9	3·3	5·1	4·1	4·9	7·5	8·0
16	− 0·1	0·4	0·3	0·8	0·9	2·4	4·9	5·7	6·7	6·9	7·9	9·1	11·0	9·1
17	6·3	4·7	2·7	1·3	3·1	4·6	6·8	7·9	8·4	8·7	7·9	10·1	12·1	11·8
18	4·7	3·8	1·9	2·8	4·7	4·5	5·1	4·7	4·3	4·6	4·6	7·4	6·2	5·7
19	2·5	2·0	1·8	1·9	1·8	1·6	2·4	3·6	4·2	5·9	8·6	13·3	14·6	13·9
20	6·8	6·3	6·8	6·4	6·4	8·9	10·3	11·4	12·3	14·9	12·1	13·1	12·8	13·5
21	3·8	4·6	5·2	1·9	5·8	8·8	8·1	10·4	11·8	14·7	16·8	15·1	16·3	17·4
22	4·9	2·4	2·4	1·9	3·5	4·1	3·8	4·6	6·3	6·0	6·0	7·5	6·8	4·1
23	0·3	− 0·3	− 0·4	− 0·4	0·8	1·6	2·9	3·6	5·7	7·7	9·3	10·9	11·9	12·4
24	1·9	0·3	0·2	− 1·1	1·3	4·6	5·7	6·8	8·4	9·0	11·2	12·4	11·9	12·8
25	2·1	1·9	1·9	1·9	1·9	1·9	3·0	3·1	2·7	3·8	4·3	7·6	8·0	8·8
26	2·4	2·3	2·5	2·8	5·1	5·8	6·3	7·6	8·6	9·6	10·7	12·3	12·9	13·5
27	0·3	1·5	0·8	2·2	3·6	4·4	5·8	9·6	12·3	12·3	12·3	11·3	10·1	14·1
28	6·8	4·3	3·0	2·0	3·6	4·6	6·2	6·4	6·9	8·6	10·2	10·7	10·7	11·9
29	2·4	1·3	1·3	2·4	4·8	7·3	9·0	11·8	13·1	14·6	16·4	17·1	18·3	18·5
30	4·6	5·2	6·3	6·9	6·2	5·7	7·3	4·9	4·2	1·8	1·6	1·9	1·8	1·8
31	− 0·3	− 0·8	− 0·8	− 0·3	− 0·3	0·3	1·3	1·7	3·0	4·3	5·7	6·2	4·7	4·3
Mean -	−1·11	−1·56	−1·89	−2·11	−1·06	−0·06	1·00	2·00	3·00	3·94	4·83	5·83	6·28	6·44

June 1883. $\varphi = +\ 62°\ 38'\ 52''$.

Days.	1	2		4	5	6	7	8	9	10	11	Noon.	1	2
1	− 1·9	− 1·9	− 2·0	− 1·9	− 1·3	− 0·2	1·3	3·3	3·8	5·1	5·7	7·4	9·6	12·8
2	6·6	5·8	5·9	7·4	6·8	7·2	10·7	11·7	13·5	14·1	12·8	15·9	21·9	14·6
3	8·4	8·9	6·7	5·7	7·4	11·2	11·9	14·2	12·9	15·8	14·7	17·9	16·1	17·1
4	3·5	2·9	3·9	5·7	6·2	6·6	8·0	12·6	13·5	12·4	13·9	12·3	14·1	19·4
5	3·8	3·8	3·6	3·6	5·2	5·4	6·3	7·4	7·5	9·3	8·4	9·7	9·6	9·4
6	4·7	4·3	3·6	3·0	3·5	3·5	3·9	5·6	6·2	7·4	7·4	7·4	7·6	7·1
7	5·8	5·7	5·6	5·7	5·7	5·8	5·9	7·2	7·8	7·7	8·3	9·0	8·6	8·6
8	1·9	2·4	2·5	3·1	3·8	4·1	4·7	4·6	4·9	4·8	6·9	6·8	6·9	6·8
9	4·6	4·7	4·5	5·5	7·2	8·0	9·3	11·8	14·5	16·5	17·4	18·3	19·4	19·5
10	7·3	6·8	6·4	7·9	11·0	11·3	10·9	14·3	14·3	14·0	16·0	16·3	16·3	16·3
11	6·1	5·6	4·1	4·2	5·2	6·1	7·1	7·9	9·2	10·2	11·8	12·8	13·6	14·1
12	5·7	4·1	3·5	4·1	5·5	6·8	7·5	8·9	9·4	11·3	11·1	11·3	11·8	12·2
13	5·2	4·6	4·5	5·3	6·2	8·2	7·9	8·9	12·0	11·3	12·9	14·5	11·5	11·2
14	7·9	6·8	6·3	5·9	6·4	6·3	7·4	7·4	7·9	8·9	10·7	11·2	10·7	10·8
15	7·9	7·4	7·9	8·4	8·4	10·4	11·6	11·3	11·8	12·9	13·0	12·6	14·1	15·0
16	8·4	8·3	8·2	8·0	7·9	8·6	9·4	10·6	11·9	12·9	12·9	13·5	13·7	13·6
17	8·5	8·0	7·4	7·9	9·1	9·6	10·8	11·7	8·5	8·0	7·9	10·1	11·3	12·5
18	7·4	7·2	6·9	7·9	7·9	7·7	6·8	6·1	6·3	8·2	9·9	10·7	11·9	13·2
19	7·4	6·8	6·6	6·8	8·2	9·9	11·1	11·8	12·4	12·8	13·5	13·5	14·1	14·6
20	5·6	5·9	6·2	6·2	6·9	7·7	9·0	9·5	9·0	9·5	9·6	9·6	9·6	9·3
21	8·2	8·2	8·4	8·2	8·2	7·9	7·9	8·5	9·4	10·1	11·0	11·2	10·7	11·3
22	12·3	11·9	11·6	11·1	10·7	10·9	11·3	11·9	12·8	13·7	15·3	16·8	17·0	17·5
23	11·3	10·1	9·2	9·9	10·7	10·3	11·8	13·2	14·0	14·0	14·1	15·4	13·6	15·7
24	11·3	11·9	11·8	12·3	12·3	13·4	14·4	15·5	15·3	16·8	16·3	16·4	16·2	16·9
25	15·2	14·6	14·4	12·7	12·7	13·2	14·3	14·6	16·1	16·3	17·1	18·5	18·5	18·0
26	13·6	12·9	13·6	14·6	16·0	19·1	19·6	21·7	21·8	22·0	23·5	22·4	23·8	22·9
27	12·8	12·3	11·7	11·2	10·6	10·1	9·4	9·1	9·0	8·6	9·6	10·9	11·4	12·3
28	6·8	5·7	5·2	6·4	8·2	9·6	10·6	11·6	12·3	12·5	13·2	14·1	14·7	14·9
29	9·4	10·1	10·2	11·0	11·7	11·2	11·8	11·8	11·2	11·3	11·3	10·8	10·8	11·2
30	8·5	8·4	8·7	10·1	11·8	12·7	12·6	13·2	14·2	15·5	16·3	16·9	17·8	19·1
Mean -	7·50	7·17	6·89	7·28	8·00	8·78	9·50	10·61	11·11	11·78	12·44	13·17	13·22	13·94

above the ground 1·78 m.

May 1883.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
3·0	1·9	2·5	1·8	0·8	0·3	− 0·3	− 0·9	− 1·3	− 1·4	− 1·00	4·0	− 6·5	10·5
− 1·2	− 2·2	− 2·8	− 5·6	− 6·7	− 7·7	− 8·1	− 8·3	− 9·3	−10·0	− 3·56	0·7	−10·0	10·7
− 8·4	− 9·5	− 9·5	− 9·9	−10·6	−11·8	−13·3	−14·3	−15·6	−16·3	−11·50	− 8·3	−16·3	8·0
− 8·3	− 7·3	− 8·4	− 8·8	− 9·4	−11·3	−12·0	−12·7	−13·2	−12·7	**−12·06**	− 7·3	**−17·9**	10·6
1·4	1·1	1·1	− 0·2	− 1·4	− 2·6	− 3·6	− 3·9	− 4·4	− 6·2	− 4·72	1·7	−13·8	15·5
− 0·3	− 0·8	− 1·3	− 2·4	− 4·0	− 6·6	− 8·2	− 9·0	− 9·9	− 9·8	− 5·11	0·2	−10·1	10·3
− 1·2	− 1·2	− 1·9	− 1·4	− 3·0	− 4·0	− 3·9	− 4·6	− 5·7	− 6·7	− 5·28	− 0·6	−11·6	11·0
0·9	1·3	0·3	0·0	− 1·4	− 3·7	− 4·6	− 5·1	− 6·1	− 6·5	− 3·94	1·9	− 9·6	11·5
0·4	0·8	0·8	1·3	1·2	1·0	0·6	0·4	0·3	0·3	− 2·22	2·4	− 9·1	11·5
5·1	5·3	5·3	4·5	3·1	2·4	0·2	0·3	− 0·1	− 1·4	1·94	5·8	− 4·1	9·9
5·4	5·1	5·2	3·8	2·9	2·1	0·3	− 0·7	− 2·8	− 4·0	1·50	7·3	− 4·0	11·3
6·4	6·4	5·5	5·8	5·2	4·2	3·1	1·7	1·6	0·8	2·78	7·6	− 4·5	12·1
8·7	8·7	7·9	7·3	6·8	5·2	3·1	3·7	3·1	− 0·8	4·00	10·1	− 0·9	11·0
6·8	6·9	7·9	7·3	5·7	4·1	3·4	1·8	0·8	0·3	3·83	9·0	− 2·2	11·2
7·4	6·8	6·9	5·9	4·6	4·4	3·1	0·9	1·1	0·2	3·22	8·3	− 1·1	9·4
9·3	9·1	9·0	9·0	9·6	7·5	5·9	7·4	7·4	− 7·2	6·17	11·7	− 0·2	11·9
7·5	8·0	10·1	11·2	10·2	7·4	6·3	6·2	4·2	5·2	7·22	12·9	1·3	11·6
4·6	6·3	6·7	5·2	5·8	5·7	5·7	5·7	4·2	2·8	4·89	8·2	1·1	7·1
11·8	8·4	8·1	6·9	7·7	7·9	4·7	7·9	6·8	7·9	6·50	15·5	1·6	13·9
14·6	18·3	13·5	14·1	12·5	11·2	9·6	7·9	6·7	6·3	10·72	18·4	3·3	15·1
12·3	10·7	9·8	10·7	9·1	7·9	6·6	4·1	3·7	4·9	9·17	17·7	1·9	15·8
4·1	3·2	2·4	2·1	2·2	1·8	1·8	1·4	1·3	0·8	3·56	9·6	0·8	8·8
12·3	12·3	10·7	9·8	10·1	9·6	6·8	2·9	3·6	2·7	6·11	12·8	− 0·8	13·6
14·3	13·2	13·4	13·5	13·1	9·7	6·9	8·4	4·1	2·4	7·67	14·4	− 1·1	15·5
9·1	7·3	8·4	7·9	8·3	8·7	5·7	4·7	3·6	3·4	5·00	9·4	1·8	7·6
12·9	13·0	12·1	12·8	12·0	10·1	8·1	2·0	1·0	1·2	7·83	13·7	1·0	12·7
11·7	13·1	10·7	7·6	10·6	9·0	7·9	7·7	7·4	7·8	8·11	14·5	0·3	14·2
12·3	13·5	13·7	11·8	11·3	9·5	6·8	4·6	4·2	2·9	7·78	13·8	2·0	11·8
15·8	16·9	17·4	13·6	11·8	11·8	11·7	8·4	8·6	6·3	**10·89**	**18·5**	1·2	17·3
1·9	1·9	1·8	1·4	1·2	0·8	0·6	0·8	0·1	− 0·3	2·94	7·3	− 0·3	7·6
5·7	4·3	3·8	2·9	2·2	0·3	− 0·7	− 0·1	− 0·3	− 1·2	1·89	6·5	− 1·2	7·7
6·00	5·89	5·50	4·83	4·22	3·06	1·72	0·94	0·17	− 0·44	2·39	7·99	− 3·52	11·51

λ = − 115° 43′ 50″ = 7h. 43m. 55s.

June 1883.

3	4	5	6	7	8	9	11	11	12	Means.	Maximum.	Minimum.	Difference.
15·0	14·7	14·3	14·1	12·4	11·8	10·8	11·4	7·9	7·5	6·67	16·8	**− 2·3**	19·1
16·8	17·9	15·4	16·8	18·1	18·5	15·7	12·9	9·9	10·2	12·39	15·8	3·7	16·1
16·3	16·8	19·1	16·2	14·0	8·4	5·8	3·8	5·2	4·2	11·61	19·6	3·8	15·8
16·3	15·7	15·7	16·8	14·6	14·0	11·4	9·5	6·8	5·2	10·89	19·4	2·4	17·0
9·0	10·2	11·9	11·8	7·4	7·7	7·4	6·7	6·4	5·8	7·39	12·4	3·3	9·1
7·6	8·3	7·9	8·2	7·9	7·4	7·1	6·7	6·3	6·3	6·22	8·5	3·0	5·5
8·3	8·6	7·3	5·9	5·1	5·1	4·6	5·1	4·1	2·6	6·44	9·4	2·6	6·8
6·8	6·8	6·9	6·1	5·9	6·8	7·4	4·6	4·7	3·6	**5·17**	7·4	1·9	5·5
17·4	18·8	16·3	16·7	16·6	12·1	9·6	9·5	9·6	7·9	12·33	19·8	3·6	16·2
15·7	15·4	14·9	14·6	13·5	12·7	9·6	9·6	7·9	6·8	12·06	16·7	6·1	10·6
15·2	15·2	15·8	15·2	14·2	13·1	11·4	9·4	8·0	6·8	10·11	15·8	3·9	11·9
12·7	13·5	13·3	13·5	11·5	10·1	8·9	7·9	7·4	6·8	9·11	13·7	3·3	10·4
12·3	12·7	10·9	9·7	9·6	9·6	9·5	8·6	7·9	7·9	9·28	15·1	4·5	10·6
12·3	12·1	11·8	11·4	11·2	10·4	9·4	8·6	8·4	8·6	9·11	13·3	5·9	7·4
14·7	15·2	15·6	14·5	14·1	13·7	11·4	11·1	10·7	9·6	11·78	15·7	7·3	8·4
13·5	14·2	12·3	12·3	14·1	13·5	11·7	10·2	9·8	9·7	11·22	14·5	7·8	6·7
11·7	12·8	14·1	12·5	13·5	13·0	11·2	9·6	8·9	7·9	10·28	14·4	7·4	7·0
13·9	14·6	14·1	13·7	13·6	12·6	10·8	9·4	8·4	7·9	9·89	14·8	5·9	8·9
14·7	14·4	14·2	12·9	12·3	11·3	9·7	8·2	7·4	6·6	10·89	14·8	6·2	8·6
8·9	8·4	6·9	7·1	7·5	7·5	7·7	7·7	7·6	7·9	7·94	10·4	5·6	4·8
15·6	16·4	14·8	12·9	12·6	12·4	12·6	12·5	13·4	12·9	11·06	16·7	7·9	8·8
16·2	15·2	13·6	14·6	13·7	13·5	13·4	12·8	12·7	11·3	13·39	17·9	8·7	9·2
18·3	17·8	17·1	16·2	14·6	13·9	13·8	12·3	12·1	11·8	13·39	20·4	9·2	11·2
15·5	15·4	15·7	14·7	14·2	14·6	13·8	14·8	15·2	15·2	14·56	17·5	11·3	6·2
17·5	20·2	18·6	18·4	18·4	16·8	14·6	14·7	14·1	13·9	15·94	22·3	12·3	10·0
23·7	22·0	20·2	19·1	17·5	16·6	16·3	14·1	12·9	12·9	**18·44**	**24·7**	12·8	11·9
12·8	13·2	14·1	14·2	14·0	12·9	11·3	9·6	8·3	7·4	11·11	14·6	7·4	7·2
14·8	14·7	14·6	14·0	13·0	11·9	11·2	9·9	9·6	8·9	11·17	15·2	5·2	10·0
10·7	10·2	10·7	10·7	11·1	10·5	10·0	9·6	9·1	8·5	10·61	11·8	8·5	3·3
18·7	18·9	19·1	18·8	17·6	17·3	17·1	16·3	15·1	14·4	14·94	19·4	8·4	11·0
14·11	**14·33**	13·89	13·44	12·78	12·00	10·83	9·89	9·22	8·56	10·83	15·76	5·92	9·84

July 1883. Height of the Thermometers

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	14·1	12·4	12·3	13·3	14·6	15·7	16·3	18·2	18·6	19·2	19·6	19·6	20·2	20·8
2	13·8	13·8	13·1	14·2	15·6	16·8	19·6	21·3	21·8	21·6	21·8	22·0	21·8	20·6
3	15·7	15·3	15·2	15·2	15·2	16·3	17·2	18·7	20·0	20·2	20·6	20·7	19·7	15·6
4	10·1	9·7	9·1	9·1	9·7	10·4	9·7	10·9	11·2	12·3	13·0	14·1	14·6	15·0
5	10·5	10·1	10·1	10·8	10·7	11·2	11·4	11·7	12·4	13·7	14·1	14·1	14·1	14·6
6	11·7	10·6	21·2	11·3	12·3	14·1	15·3	16·7	18·8	20·1	21·6	20·7	21·3	20·5
7	15·2	14·1	13·8	14·6	15·8	17·0	17·4	19·6	20·0	20·8	21·2	21·7	22·3	22·8
8	14·1	13·3	13·1	14·6	15·2	16·3	16·8	17·6	18·6	20·7	20·7	21·8	21·8	21·3
9	16·3	15·1	15·7	16·7	16·9	16·8	17·4	18·9	21·1	21·3	22·6	21·6	24·1	24·1
10	15·1	14·1	14·1	14·1	14·1	14·4	15·3	16·3	16·2	16·4	16·4	16·7	17·5	16·9
11	10·7	9·3	9·6	9·1	9·0	9·4	9·6	9·6	10·0	10·1	10·1	10·7	10·6	10·8
12	10·6	9·6	8·9	9·0	10·7	12·3	14·1	15·6	17·3	18·3	19·4	19·7	20·0	20·4
13	11·8	11·3	11·1	11·6	12·9	14·3	16·3	17·7	18·0	16·3	16·9	17·9	17·7	19·0
14	11·8	12·0	11·6	11·9	12·9	14·6	14·2	15·7	16·2	17·0	18·0	17·9	19·6	19·6
15	11·8	10·7	10·4	11·2	14·6	16·0	15·4	16·3	16·4	18·6	18·5	19·1	19·6	20·1
16	11·8	11·3	10·8	11·5	14·2	15·3	16·3	17·1	18·6	19·6	19·6	19·6	19·7	20·4
17	12·8	12·8	12·9	13·6	14·3	15·3	16·2	17·4	17·4	17·9	19·0	19·1	19·3	19·6
18	11·9	14·1	14·5	12·3	14·9	15·9	16·9	17·4	17·5	18·9	18·5	18·9	20·0	20·3
19	17·4	14·6	13·5	14·1	15·8	15·9	17·1	18·8	17·8	18·6	18·8	20·3	23·4	22·7
20	14·9	14·6	14·5	14·6	16·2	16·8	17·9	18·1	19·6	19·5	19·7	22·0	22·1	22·3
21	16·4	15·7	15·9	15·7	16·3	16·4	18·2	20·2	21·1	21·3	21·8	22·1	22·2	21·8
22	15·7	16·0	15·4	14·3	15·1	15·7	16·3	15·8	17·2	17·9	18·2	18·3	19·2	19·7
23	14·7	14·6	14·1	14·0	13·8	13·6	15·2	16·9	18·0	18·6	20·7	21·3	21·5	22·3
24	12·1	10·9	11·8	11·7	11·8	12·3	12·9	13·6	14·2	15·1	14·9	15·2	15·2	17·6
25	12·2	11·8	11·8	12·2	12·3	11·3	10·3	10·1	10·7	11·1	11·5	12·5	13·3	12·8
26	10·7	10·7	10·1	10·1	11·3	12·6	12·9	13·5	14·1	14·9	16·3	16·8	16·5	17·4
27	10·3	10·6	10·3	11·2	10·2	10·8	11·2	12·2	13·1	15·3	15·5	15·8	14·7	12·9
28	10·3	9·7	9·6	8·9	9·6	10·9	11·9	12·9	14·1	15·2	16·3	17·6	17·9	18·4
29	11·1	10·2	10·2	10·4	12·3	13·9	15·3	17·3	17·8	18·5	19·6	20·7	21·3	21·6
30	15·2	14·9	15·1	15·1	15·3	16·3	16·9	17·3	18·1	19·1	19·6	20·5	21·1	21·4
31	16·8	16·3	16·4	16·1	15·7	15·6	15·7	16·6	15·7	15·2	16·3	16·4	18·8	19·1
Mean -	13·17	12·61	12·44	12·67	13·50	14·33	15·06	16·11	16·83	17·50	18·11	18·56	19·06	19·11

August 1883. $\varphi = +\ 62°\ 38'\ 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	15·3	15·2	14·8	14·9	14·9	15·3	16·3	16·8	17·4	18·4	18·7	19·6	20·2	20·4
2	17·7	17·2	16·8	16·3	15·8	15·2	15·1	15·8	15·4	17·4	17·7	18·5	19·1	20·2
3	16·8	17·6	17·3	16·7	16·9	16·7	17·1	17·4	19·8	20·4	24·8	24·8	23·4	21·8
4	13·5	13·5	13·6	13·1	13·4	14·1	14·6	14·8	15·2	15·8	16·9	18·3	19·6	20·9
5	13·3	13·5	11·3	10·7	11·9	13·4	14·5	15·6	17·4	18·9	19·3	20·7	20·7	21·3
6	16·2	15·8	15·4	15·2	15·2	14·7	15·4	17·1	17·9	16·7	17·5	18·5	18·2	18·3
7	14·6	14·7	14·8	14·3	13·5	14·6	13·6	12·9	11·8	12·1	13·5	14·6	15·2	16·7
8	10·9	11·2	11·2	11·7	11·8	11·3	11·7	11·8	12·9	14·2	14·4	15·7	15·6	17·1
9	11·3	11·4	11·3	11·1	11·1	12·1	13·6	14·0	15·7	17·6	17·4	16·7	16·8	17·4
10	12·3	12·3	12·3	12·3	12·4	13·6	15·2	16·3	16·9	16·9	17·2	17·4	18·4	16·5
11	15·1	15·1	14·7	14·6	14·7	15·2	15·8	16·3	16·8	17·5	18·6	18·5	18·7	19·1
12	15·7	15·7	15·2	15·2	15·0	14·9	16·8	17·0	16·3	16·9	17·4	18·5	19·4	19·4
13	16·7	15·8	16·1	15·8	15·7	15·7	15·3	15·4	16·1	15·8	16·2	16·8	17·2	19·2
14	15·2	14·6	14·1	13·7	13·8	14·1	14·7	15·4	15·1	15·1	14·8	14·4	13·3	13·6
15	12·3	12·3	11·7	11·8	11·8	12·3	13·1	14·1	15·2	15·4	16·4	16·4	17·3	17·4
16	7·9	7·9	8·1	8·2	8·6	9·0	10·2	11·2	11·8	12·5	12·9	12·6	12·6	13·4
17	10·7	10·7	10·7	10·7	10·7	11·1	11·2	12·1	13·3	14·2	15·5	16·3	16·6	17·0
18	10·2	9·9	9·6	9·5	10·3	11·5	13·1	14·6	16·1	17·6	17·5	17·4	17·6	17·7
19	12·7	12·4	11·8	11·5	11·5	12·2	11·8	12·4	12·9	12·4	12·3	12·8	12·8	11·9
20	7·9	7·9	7·6	7·4	6·8	7·3	7·9	8·2	8·7	9·8	9·4	10·5	11·0	10·9
21	5·2	4·1	3·8	3·4	3·6	5·4	6·7	8·7	9·8	10·4	11·3	12·3	12·3	12·6
22	7·8	7·7	7·9	7·7	7·9	8·5	8·7	9·7	11·7	13·4	14·3	15·1	15·7	16·2
23	8·2	8·4	7·8	6·9	7·9	9·1	9·6	11·6	12·9	14·5	15·4	16·0	16·1	16·9
24	7·9	6·8	6·2	5·7	6·4	7·4	7·8	9·6	12·1	12·6	13·5	12·7	14·2	14·2
25	11·2	11·2	10·3	9·6	8·9	10·2	10·7	11·8	13·4	15·2	16·3	14·7	16·2	15·3
26	8·6	8·1	6·9	5·9	6·8	8·4	9·7	10·6	11·2	12·4	13·3	14·3	14·6	15·2
27	9·6	8·9	8·2	8·0	7·9	8·6	9·8	11·6	13·4	14·7	16·3	15·7	16·1	15·2
28	9·3	9·6	8·7	9·8	8·1	10·1	11·8	12·4	14·0	16·2	16·8	17·3	17·9	17·4
29	7·9	6·3	5·2	4·7	5·0	6·7	8·3	10·2	10·7	11·0	12·9	14·1	13·5	15·5
30	6·9	7·0	7·4	6·8	5·9	6·2	6·8	7·9	9·0	10·3	10·1	10·5	10·7	9·3
31	7·0	6·8	5·4	4·8	4·7	5·3	6·8	8·4	10·1	11·8	12·8	11·8	13·6	14·1
Mean -	11·50	11·28	10·83	10·56	10·61	11·28	12·06	12·94	13·89	14·78	15·56	15·94	16·28	16·50

above the ground 1·78 m.

July 1883.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
21·7	21·9	21·0	21·8	21·3	19·1	17·4	15·7	15·1	14·0	17·67	22·8	12·3	10·5
21·7	22·3	22·6	21·3	20·1	17·4	16·8	16·3	15·9	15·9	18·67	23·5	13·1	10·4
17·5	17·4	17·8	17·4	17·4	16·8	15·8	15·2	14·1	11·2	16·94	21·2	11·2	10·0
15·4	15·8	15·9	15·4	15·1	14·1	12·0	10·2	9·7	10·7	12·22	16·6	8·9	7·7
15·2	15·3	15·7	14·7	14·0	14·1	13·8	13·3	12·9	11·8	12·94	15·7	9·7	6·0
22·5	22·8	22·6	20·7	16·1	15·6	15·7	15·4	16·0	15·4	17·06	**24·7**	10·6	14·1
23·0	23·1	23·2	21·4	22·4	20·1	18·5	17·3	15·6	15·6	19·00	23·9	13·6	10·3
22·7	22·8	20·2	20·7	19·4	18·5	17·7	16·8	16·0	15·9	18·17	23·2	12·7	10·5
24·0	23·3	22·8	22·6	21·3	20·7	19·0	18·5	17·4	15·7	**19·72**	24·6	15·1	9·5
16·4	16·3	16·3	15·7	15·8	15·8	14·9	14·6	13·5	11·3	15·33	17·8	11·3	6·5
11·7	12·3	12·3	12·3	12·3	12·3	12·2	11·8	11·7	11·2	**10·78**	12·3	8·9	3·4
20·7	20·7	20·4	19·8	19·6	19·1	16·7	14·8	14·3	12·9	16·06	21·2	**8·7**	12·5
19·8	20·2	20·6	19·2	18·6	16·7	15·1	14·2	13·6	12·8	16·00	21·2	11·0	10·2
19·1	18·8	18·9	20·0	19·3	17·2	15·4	13·9	13·6	13·0	15·94	20·4	11·6	8·8
20·1	20·0	19·7	19·3	18·6	17·7	16·3	14·9	13·3	12·9	16·33	20·6	10·3	10·3
20·7	20·1	19·6	19·2	18·3	17·4	16·8	15·1	13·7	13·6	16·67	21·1	10·2	10·9
19·3	19·2	18·6	18·0	17·4	16·8	15·8	15·6	15·2	13·8	16·56	19·7	12·7	7·0
21·2	20·4	20·6	19·9	19·1	18·7	17·3	17·0	16·8	15·3	17·44	21·3	11·9	9·4
22·5	21·8	21·3	19·6	19·1	18·5	18·0	18·0	17·5	16·3	18·39	23·9	13·3	10·6
21·1	21·3	21·3	20·1	20·0	18·6	17·9	17·3	16·8	16·7	18·50	22·8	14·3	8·5
20·7	20·7	20·6	20·5	19·9	19·1	18·3	17·4	16·4	16·6	19·00	23·3	15·4	7·9
21·4	20·7	20·6	19·4	19·1	18·7	17·0	16·6	14·8	15·2	17·44	21·8	14·2	7·6
20·2	16·8	17·9	16·8	15·8	15·6	14·9	14·3	14·1	13·3	16·61	22·6	13·3	9·3
16·2	17·4	16·7	13·3	14·1	13·5	12·3	11·4	12·1	12·4	13·72	17·8	10·9	6·9
12·6	13·1	13·4	14·1	14·1	13·6	12·9	12·7	12·3	12·4	12·28	14·3	9·9	4·4
16·8	16·3	17·8	16·2	14·6	12·9	11·8	11·7	10·7	10·4	13·61	19·2	10·1	9·1
10·8	11·6	11·8	11·8	11·6	11·0	10·6	10·3	10·8	10·7	11·89	17·2	10·1	7·1
18·5	18·6	18·5	18·5	17·4	16·3	14·6	13·0	12·4	11·7	14·28	19·5	8·8	10·7
21·9	21·3	20·7	19·7	18·6	17·4	16·3	15·3	15·2	15·3	16·72	22·4	10·2	12·2
21·1	20·7	20·6	19·7	19·1	18·5	16·9	16·3	17·3	16·9	18·06	21·9	14·8	7·1
19·7	19·6	19·3	18·5	17·9	17·4	16·8	17·2	16·3	15·8	17·06	19·9	15·2	4·7
19·22	19·11	19·00	18·33	17·67	16·72	15·67	14·89	14·33	13·78	16·17	20·59	11·75	8·84

$\lambda = -\ 115^\circ\ 43'\ 50'' = -$ 7h. 42m. 55s.

August 1883.

3	4	5	6	7	8	9	10	11	12	Means.	Maximum.	Minimum.	Difference.
20·7	20·8	20·3	19·1	18·6	18·4	17·6	17·6	17·8	17·6	17·78	20·9	14·8	6·1
21·1	20·3	18·1	18·1	18·5	19·6	18·1	17·9	17·7	17·4	17·72	21·5	15·0	6·5
23·6	24·7	24·3	22·9	21·9	20·2	18·1	17·9	16·4	15·8	**19·89**	**25·6**	15·2	10·4
20·3	20·9	20·7	20·6	19·8	18·9	15·9	15·7	14·6	14·1	16·61	21·3	13·1	8·2
21·7	21·1	20·8	19·1	18·5	17·9	16·5	16·7	17·3	16·3	17·00	22·2	10·7	11·5
17·4	16·3	18·8	17·9	18·1	16·9	15·1	14·1	14·1	14·7	16·50	18·9	14·1	4·8
17·3	17·4	17·4	16·8	15·2	13·5	11·3	9·8	9·6	10·1	13·94	17·8	9·5	8·3
17·5	18·4	17·4	15·7	13·9	13·0	12·9	12·3	11·6	11·4	13·56	18·5	10·9	7·6
17·5	17·0	16·7	15·8	15·4	15·1	14·3	13·7	12·9	12·3	14·50	18·9	11·0	7·9
16·4	17·3	16·8	17·2	16·3	15·7	15·2	15·2	15·3	15·3	15·44	18·9	12·2	6·7
19·3	19·2	18·9	18·3	16·8	15·9	15·6	15·4	15·8	15·7	16·72	19·6	14·0	5·6
20·7	20·7	20·2	19·6	18·5	17·7	16·8	17·2	16·8	16·8	17·44	21·2	14·9	6·3
19·6	19·8	21·8	19·6	19·7	18·8	17·8	16·2	15·7	15·7	17·22	22·3	15·3	7·0
13·5	13·8	14·2	13·3	14·1	13·8	13·5	13·2	12·9	12·4	14·00	15·4	12·4	3·0
17·3	17·7	16·8	15·7	13·9	11·8	10·2	9·1	9·0	8·1	13·61	17·7	8·1	9·6
13·2	12·7	12·8	12·1	10·7	10·6	10·7	10·4	10·6	10·7	10·89	14·1	7·8	6·3
16·3	16·3	16·3	16·0	14·9	14·2	12·9	11·7	11·2	10·2	13·39	17·3	10·2	7·1
17·5	17·4	16·4	15·8	16·3	16·2	15·8	15·5	14·7	13·5	14·67	18·6	9·1	9·5
11·8	11·7	11·6	10·7	10·0	9·6	9·3	8·9	7·9	8·1	11·28	13·8	7·9	5·9
10·1	10·6	10·2	9·0	8·0	6·8	6·5	6·1	5·8	5·1	**8·33**	11·3	5·1	6·2
12·7	12·7	12·3	11·7	11·1	10·2	9·6	7·9	7·4	7·4	8·89	13·1	**3·3**	9·8
16·9	16·9	16·7	15·1	13·2	12·1	10·7	10·4	9·1	9·0	11·78	17·8	7·2	10·6
16·7	16·0	15·7	14·5	12·9	11·2	10·3	10·1	9·3	7·9	11·89	17·3	6·9	10·4
11·2	13·0	12·4	12·2	11·8	12·0	11·8	11·2	11·2	11·3	10·61	14·5	5·6	8·9
16·8	16·3	15·8	16·8	13·8	13·6	12·4	11·3	10·4	9·5	13·00	17·5	8·8	8·7
14·6	15·4	15·2	13·3	10·7	9·5	9·1	10·1	10·6	10·2	11·00	15·6	5·8	9·8
14·8	14·8	14·6	14·4	13·2	12·3	11·8	10·7	10·2	9·6	12·11	16·4	7·7	8·7
17·4	17·4	16·2	14·1	12·9	10·8	10·2	9·6	8·1	7·7	12·67	17·9	7·7	10·2
14·6	14·7	13·6	12·3	11·4	10·7	9·8	8·9	8·4	8·3	10·22	15·8	4·7	11·1
9·6	10·0	10·2	10·1	9·6	9·6	9·0	8·4	7·9	7·4	8·61	11·0	5·8	5·2
14·9	14·6	14·1	13·5	10·3	9·6	9·6	9·3	9·3	8·5	9·89	14·9	4·7	10·2
16·56	**16·61**	16·39	15·56	14·50	13·72	12·83	12·33	11·94	11·56	13·61	17·66	9·66	8·00

September 1882. Height of the Thermometers

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
1	7·2	69	7·3	71	6·9	76	7·7	93	7·4	99	6·8	99	6·3	89	6·2	83	6·4	78	6·0	66	6·2	69	6·0	62
2	5·9	73	6·1	78	6·4	78	6·7	84	6·4	81	6·8	84	7·1	88	7·2	87	6·8	83	7·4	88	6·3	87	5·8	84
3	2·7	50	3·8	62	4·0	71	4·2	75	4·1	71	4·1	71	4·6	66	4·1	69	4·9	66	4·6	59	4·3	64	4·7	49
4	4·6	77	4·5	76	4·2	79	4·3	84	3·5	71	4·5	86	4·7	83	5·0	77	4·9	68	5·3	72	4·9	63	4·9	56
5	4·3	71	4·1	66	4·2	71	4·0	68	4·6	80	4·7	81	4·2	71	4·1	64	4·7	70	4·9	69	4·8	66	5·0	64
6	5·2	82	5·0	79	5·1	78	5·2	75	5·6	78	5·9	80	5·5	76	5·6	79	5·9	78	6·1	81	6·7	91	6·3	79
7	6·0	89	5·6	86	5·8	87	6·0	91	6·3	94	6·3	91	6·9	90	6·4	84	6·4	82	6·5	77	7·1	75	7·0	76
8	6·5	92	6·1	85	6·3	90	6·0	91	6·1	100	6·4	100	7·0	87	6·6	77	7·1	69	7·7	67	6·8	61	7·3	61
9	5·8	88	5·7	88	5·7	89	5·9	100	5·6	90	6·1	85	6·9	81	6·8	75	6·7	68	7·5	70	8·8	77	10·1	85
10	7·7	93	7·4	84	7·8	92	7·7	91	7·8	95	8·0	90	8·2	84	8·8	87	9·0	89	8·9	85	8·8	83	8·8	81
11	8·5	93	8·6	92	8·9	96	8·7	92	8·8	96	8·9	96	8·8	91	8·9	91	8·8	89	8·8	87	8·9	86	8·9	85
12	9·5	91	9·5	93	9·8	98	9·8	97	9·7	95	9·8	98	9·8	97	9·7	99	9·6	99	9·9	99	9·6	96	9·7	97
13	6·4	83	6·5	84	6·6	87	6·7	91	7·0	99	6·4	89	6·0	84	6·1	81	6·1	80	6·3	79	6·3	79	6·6	80
14	5·0	85	5·3	93	4·8	86	4·7	88	5·0	95	5·1	94	5·2	92	5·2	82	5·8	81	6·1	69	5·9	65	5·5	59
15	5·6	88	4·8	79	5·2	88	5·7	100	5·4	95	5·4	95	5·9	87	6·0	79	6·1	76	5·7	66	6·1	67	5·6	54
16	5·6	86	5·6	85	5·6	85	5·6	85	5·9	88	5·7	86	6·0	90	6·0	85	6·0	85	6·1	82	6·0	77	6·1	68
17	5·5	96	5·0	85	5·6	100	5·5	100	5·2	97	5·3	97	5·9	94	5·9	82	5·6	71	6·4	77	6·2	78	6·6	80
18	6·6	87	7·2	94	7·2	94	7·2	95	7·3	95	7·5	94	7·5	89	7·4	87	7·4	88	7·5	87	7·2	82	7·5	75
19	7·5	86	7·4	88	7·7	91	7·9	93	7·8	91	7·7	92	7·7	84	8·1	82	8·2	78	8·8	73	7·6	57	7·1	48
20	6·4	76	6·1	74	6·3	80	6·4	85	6·3	85	6·2	86	6·7	79	7·3	87	7·0	77	7·8	91	7·5	95	7·1	93
21	5·1	81	4·7	72	5·1	78	5·1	81	5·1	84	4·9	82	5·2	80	5·0	76	5·0	69	5·0	64	5·1	61	5·0	57
22	4·5	90	4·6	96	4·7	93	4·8	95	4·4	95	4·6	89	5·8	93	6·1	90	6·1	85	5·9	75	6·0	74	6·1	71
23	6·4	94	6·3	90	6·5	97	6·7	98	6·1	86	6·2	94	6·2	90	6·4	86	6·4	81	6·7	77	6·5	73	6·4	70
24	5·8	86	6·1	89	6·0	90	5·9	87	6·0	89	6·0	89	4·8	67	6·0	84	6·3	84	6·7	79	6·7	75	7·1	81
25	7·1	84	6·9	77	6·5	68	6·6	74	6·1	63	6·4	78	6·1	67	6·1	59	6·2	57	6·5	56	6·6	54	6·8	50
26	7·2	93	6·8	93	6·3	85	5·6	79	5·5	77	5·3	84	4·9	77	4·9	78	5·0	69	5·1	74	4·6	69	4·7	71
27	3·8	78	3·8	77	3·8	77	3·7	78	3·7	78	3·9	87	3·3	73	3·2	69	3·1	63	3·2	58	3·0	54	3·2	56
28	1·8	48	2·6	71	2·7	73	2·5	67	2·7	70	3·0	83	2·6	69	2·9	75	3·4	62	3·2	54	3·1	51	3·0	47
29	2·8	68	2·8	67	3·2	77	3·0	77	3·4	87	3·0	79	3·1	81	3·2	81	2·9	62	3·5	75	3·8	84	3·6	75
30	2·5	64	2·5	67	2·5	63	3·0	69	3·2	73	3·1	71	3·4	75	4·1	92	3·6	72	3·4	62	3·3	60	3·2	57
Mean -	5·63	81·4	5·61	81·4	5·71	83·9	5·76	86·1	5·73	86·6	5·81	87·7	5·87	82·5	5·97	80·9	6·04	76·0	6·24	73·9	6·14	72·4	6·17	69·0

October 1882. $\varphi = +\ 62°\ 38'\ 52''$.

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
1	3·5	81	3·6	84	3·6	85	2·7	68	2·1	49	2·9	75	2·3	59	3·1	69	3·3	66	4·2	73	3·1	52	3·0	47
2	3·4	76	3·6	81	3·5	81	3·2	75	3·4	81	3·4	81	3·7	84	3·8	81	3·6	66	3·2	49	3·8	53	3·6	50
3	3·9	82	3·9	85	3·8	85	3·7	86	3·7	86	3·4	81	3·1	63	4·1	69	4·3	66	5·4	72	4·9	59	4·6	50
4	4·5	89	4·5	86	4·8	94	4·8	91	5·1	96	4·8	96	4·8	98	5·0	88	5·3	83	5·4	69	5·1	57	5·2	54
5	5·1	78	5·3	85	4·8	91	4·8	92	5·2	95	5·0	94	4·8	87	4·4	78	4·7	78	4·9	94	4·8	87	4·7	85
6	4·8	91	5·2	95	5·2	98	5·0	99	4·6	91	4·7	93	4·2	86	4·7	94	5·0	97	5·2	98	5·1	97	5·0	89
7	5·4	93	5·4	93	5·4	92	5·4	91	5·3	92	5·8	99	5·4	92	5·4	93	5·4	93	5·4	92	5·6	90	5·5	88
8	5·6	99	5·4	98	5·4	99	5·4	99	5·2	99	5·1	97	5·1	97	5·1	97	5·2	79	5·3	90	5·8	86	5·3	80
9	4·9	96	4·7	91	4·7	92	5·0	92	5·0	99	5·0	94	5·1	91	5·4	86	5·6	77	5·8	74	6·1	67	5·6	60
10	5·0	92	5·0	91	4·8	92	4·7	97	4·2	83	4·7	94	4·8	99	4·9	99	4·8	99	5·0	99	4·9	83	4·9	71
11	4·0	85	4·1	87	4·1	88	4·1	87	4·1	87	4·0	87	4·1	87	4·1	87	4·2	82	4·3	81	4·3	78	4·3	75
12	4·8	95	4·9	97	5·0	97	5·0	94	5·2	99	5·4	98	5·4	98	5·5	97	5·8	97	6·0	95	6·0	92	6·0	89
13	5·0	83	4·8	79	4·9	84	5·0	85	5·0	84	4·8	82	4·7	80	4·9	82	4·7	78	4·8	82	4·8	79	4·7	77
14	4·5	89	4·5	89	4·5	92	4·6	94	4·4	93	4·4	95	4·3	92	4·4	94	4·4	94	3·9	87	3·8	85	3·7	81
15	4·9	96	5·0	98	4·8	98	4·8	98	4·6	95	4·5	97	4·5	96	4·8	96	4·6	90	4·5	88	4·2	82	4·3	78
16	3·6	84	3·7	86	3·6	84	3·6	83	3·7	85	3·5	81	3·0	79	3·2	73	3·7	72	3·4	61	3·1	53	3·6	69
17	2·6	78	2·4	75	2·4	77	2·6	84	2·4	81	2·5	86	2·6	86	2·5	80	2·5	76	2·3	67	2·6	68	2·7	64
18	3·2	89	3·5	90	3·7	91	4·0	95	3·7	91	4·3	97	4·3	95	4·2	90	4·1	86	4·1	83	4·2	86	4·1	82
19	4·0	84	4·0	85	4·0	85	4·4	90	4·4	95	3·9	93	3·9	92	4·0	97	3·8	89	3·9	90	3·7	84	3·8	85
20	3·6	94	3·6	94	3·6	94	3·6	94	3·5	92	3·5	92	3·4	88	3·4	87	3·4	86	3·5	83	3·9	91	3·9	93
21	3·4	93	3·3	89	3·3	89	3·4	87	3·6	87	4·2	96	4·1	97	4·0	97	4·1	97	4·3	99	3·8	77	3·8	74
22	4·4	96	4·5	99	4·4	99	4·4	99	4·4	99	4·3	99	4·4	98	4·1	90	4·1	88	3·9	79	3·8	74	3·8	76
23	4·3	99	4·3	99	4·3	99	4·3	99	4·2	97	4·1	97	4·1	97	4·0	95	4·3	97	4·1	87	4·0	85	4·1	87
24	3·5	90	3·2	84	3·4	88	3·3	88	3·4	93	3·2	88	3·1	88	3·1	88	3·1	85	3·1	79	3·4	86	3·4	81
25	2·8	77	2·8	82	2·8	82	2·6	78	2·7	84	2·7	82	2·6	81	2·6	80	2·3	69	2·5	68	2·6	71	3·0	76
26	3·1	79	3·3	84	3·1	79	3·1	79	3·0	76	3·4	81	3·4	82	3·5	83	3·8	94	4·0	95	4·1	96	4·1	94
27	3·2	74	3·1	78	3·2	78	3·3	79	3·4	81	3·4	81	3·5	83	3·0	76	2·5	63	3·3	81	3·6	88	3·9	93
28	4·1	87	4·1	87	4·6	97	4·4	93	4·5	95	4·3	88	4·4	89	4·3	87	4·2	85	4·3	84	4·4	85	4·4	84
29	4·5	99	4·5	99	4·6	99	4·5	97	4·5	98	4·5	98	4·5	99	4·5	99	4·6	98	4·5	97	3·9	97	2·9	87
30	2·0	81	2·1	83	2·1	83	2·0	77	2·1	80	2·0	78	2·0	76	2·1	77	2·2	79	2·1	74	2·2	77	2·1	71
31	2·6	86	2·1	73	2·4	83	2·2	79	1·9	70	1·9	74	2·1	80	2·0	77	1·9	78	1·9	77	1·8	68	1·8	72
Mean -	4·01	87·6	4·01	87·9	4·04	89·5	4·01	88·7	3·96	88·2	3·99	89·5	3·94	87·7	4·01	86·6	4·04	83·5	4·14	82·2	4·11	78·5	4·04	76·2

above the ground 1·78 m.

September 1882.

1		2		3		4		5		6		7		8		9		10		11		12		Means.	
m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
6·2	53	6·1	48	6·0	52	5·2	44	6·7	56	6·6	69	6·6	82	7·2	85	6·6	80	6·5	76	6·3	74	6·0	74	6·50	72·8
5·8	85	5·4	84	5·6	76	5·4	74	5·4	75	5·1	73	4·5	71	3·8	62	3·7	62	3·7	65	3·4	59	3·5	62	5·58	76·8
4·7	59	4·7	56	4·7	60	4·7	61	4·6	64	4·8	63	4·8	74	4·5	70	4·6	74	4·5	76	4·0	63	4·2	67	4·36	65·0
4·9	61	4·8	57	4·8	58	5·0	64	4·8	63	4·5	63	4·4	66	4·3	68	4·3	67	4·2	64	4·4	67	4·3	67	4·57	69·0
5·4	59	5·1	59	5·3	63	5·2	65	4·9	66	4·9	66	5·2	76	5·2	79	5·1	78	5·2	80	5·1	78	5·3	83	4·80	70·5
6·1	75	6·7	85	6·4	81	6·3	79	6·4	82	6·3	84	6·1	80	6·0	84	5·8	81	5·8	86	5·7	84	5·8	86	5·92	81 0
7·0	79	7·0	82	7·6	95	7·5	93	7·4	88	7·3	90	7·3	95	7·2	94	7·3	96	7·1	99	6·7	94	6·9	96	6·78	88·5
7·2	57	7·6	59	7·4	61	7·8	68	7·4	61	7·1	72	7·5	92	6·6	86	6·9	95	6·6	88	6·6	95	5·8	81	6·83	79·0
10·6	87	10·3	92	10·1	94	9·7	94	9·7	85	9·9	99	7·7	81	7·7	85	7·7	87	7·5	87	7·6	86	6·7	75	7·77	85·3
8·8	77	8·7	79	8·8	81	8·6	80	8·6	81	8·6	87	8·4	88	8·5	94	8·0	88	8·6	94	8·4	92	8·4	93	8·38	87·0
8·8	84	9·1	85	9·1	85	9·0	86	9·1	88	9·3	91	9·3	97	9·1	96	9·2	93	8·8	84	9·5	94	9·5	96	**8·97**	**90·5**
9·5	93	9·1	89	8·9	78	8·7	84	8·1	80	7·8	80	7·4	79	7·5	84	6·8	75	6·5	81	6·6	86	6·4	82	8·73	89·6
6·5	78	6·3	75	6·0	69	6·4	78	6·3	84	5·8	77	5·9	81	5·7	82	5·8	88	5·7	89	5·6	92	5·3	92	6·17	83·4
5·8	63	5·8	56	6·2	61	6·5	67	6·0	60	6·1	71	5·8	79	6·1	86	6·1	89	6·1	93	6·1	95	5·9	93	5·66	79·3
5·5	52	5·6	46	5·8	59	5·7	63	5·9	69	6·1	77	5·9	82	6·1	91	5·5	76	5·9	87	5·6	82	5·6	83	5·68	76·7
6·0	54	6·1	63	6·0	64	5·9	63	5·9	55	6·9	81	6·8	88	6·7	91	6·6	91	6·3	91	5·8	86	6·1	99	6·07	80·3
6·3	69	6·0	65	6·6	74	6·5	72	6·5	80	5·9	74	6·5	83	6·7	85	6·6	85	6·7	88	6·9	89	7·3	94	6·14	84·0
7·5	72	7·1	69	7·2	71	7·4	74	7·4	75	7·7	87	7·7	89	7·8	91	8·0	93	7·3	86	7·4	87	7·4	87	7·39	85·3
7·3	47	6·7	**40**	6·5	42	6·6	44	6·8	45	6·6	52	6·6	69	6·5	73	6·0	61	5·9	62	6·1	68	6·1	68	7·14	68·1
7·1	90	6·7	82	6·5	71	6·2	69	5·8	69	5·7	71	5·7	72	6·1	81	5·7	76	5·9	83	5·6	80	4·9	75	6·38	80·3
4·9	52	4·9	56	4·8	54	4·9	60	4·8	57	5·0	70	5·0	77	4·4	76	4·4	77	3·7	69	4·9	91	4·5	88	4·85	71·3
5·5	59	5·2	55	5·4	64	5·3	65	5·1	65	5·5	76	5·0	71	5·2	73	5·8	88	5·8	86	5·9	86	5·8	83	5·38	79·9
6·4	69	6·6	71	6·7	75	6·6	76	6·6	83	6·5	84	6·4	82	6·5	84	5·9	78	6·0	84	6·1	85	5·9	82	6·38	82·9
6·9	77	6·9	72	6·9	74	6·5	73	6·6	74	7·0	89	7·2	94	7·2	94	7·4	94	7·7	97	7·6	94	7·3	89	6·60	84·2
6·4	49	6·1	49	6·2	54	6·8	68	6·7	67	7·0	82	6·7	84	6·6	83	6·6	86	6·9	91	6·9	88	6·9	88	6·58	69·8
4·5	63	4·5	61	4·3	59	4·1	62	4·1	68	3·2	58	3·1	57	3·1	59	3·2	59	3·2	64	3·4	68	4·0	85	4·62	71·3
2·8	52	2·8	49	2·6	47	3·3	62	3·0	59	3·2	71	2·6	58	2·7	60	2·8	62	2·5	55	2·3	54	2·1	54	3·12	63·8
3·2	45	3·1	55	3·3	60	3·8	80	2·8	58	2·9	68	2·9	67	2·7	62	2·9	67	2·7	64	2·7	66	2·8	66	**2·89**	**63·7**
3·5	66	3·1	52	3·4	76	3·6	74	3·6	80	3·1	79	3·4	77	3·9	93	3·1	72	3·2	82	3·0	77	2·5	62	3·24	75·1
3·2	56	3·2	57	3·3	60	3·4	62	2·8	56	3·6	72	3·6	71	4·0	81	3·7	77	3·5	81	4·2	94	4·1	96	3·35	70·3
6·14	66·1	6·04	**64·9**	6·09	67·3	6·09	70·1	5·99	69·8	5·99	75·9	5·87	78·7	5·84	81·1	5·73	79·8	5·66	81·1	5·68	81·8	**5·58**	81·5	5·89	77·5

$\lambda = -115^\circ\ 43'\ 50'' = -7\text{h. } 42\text{m. } 55\text{s.}$

October 1882.

1		2		3		4		5		6		7		8		9		10		11		12		Means.	
m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p.c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m.m.*	*p. c.*	*m.m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
3·2	**46**	3·2	48	3·3	51	3·5	58	3·5	59	3·5	63	4·8	95	4·1	86	3·2	71	3·5	75	3·8	82	3·5	77	3·35	67·5
3·8	**46**	4·1	48	4·1	53	4·1	55	4·1	60	4·3	76	4·2	77	2·9	53	2·8	56	2·8	56	3·8	75	3·7	78	3·63	**66·3**
4·8	50	4·8	49	4·5	51	4·8	62	4·6	67	4·6	76	4·5	78	4·5	86	4·4	89	4·1	87	4·2	84	4·5	88	4·29	73·0
5·0	50	5·0	50	5·0	51	5·2	58	5·1	67	4·9	76	4·9	77	4·9	74	4·7	69	4·5	66	4·7	71	4·7	72	4·90	74·3
4·8	82	4·9	82	5·0	85	4·8	81	4·7	83	4·6	84	4·6	84	4·5	82	4·6	87	4·8	91	4·5	96	3·6	74	4·95	85·6
5·4	90	5·6	92	5·6	92	5·4	90	5·4	90	5·5	90	5·6	92	5·6	92	5·8	97	5·4	91	5·4	92	5·4	93	5·18	92·9
5·6	86	5·8	78	5·7	91	5·7	89	5·5	95	5·4	95	5·5	100	5·4	99	5·5	100	5·5	100	5·7	100	5·5	98	**5·51**	93·3
5·5	76	5·5	75	5·6	75	5·5	75	5·7	92	5·7	94	5·3	95	5·4	94	5·4	96	5·2	92	5·2	91	5·0	94	5·36	90·4
6·1	66	5·8	63	5·2	63	5·6	78	5·5	81	5·5	81	5·6	85	5·6	85	5·6	89	5·5	89	5·1	87	5·1	90	5·38	82·3
4·8	73	4·9	66	4·7	66	4·5	76	4·4	79	4·4	83	4·3	80	4·3	83	4·1	81	4·1	81	3·9	81	4·0	85	4·60	84·7
4·2	71	4·1	70	4·1	70	4·1	71	4·1	75	4·2	81	4·3	87	4·3	88	4·4	91	4·7	97	3·8	78	4·5	89	4·19	82·5
6·1	92	6·0	92	5·6	88	5·5	84	5·5	84	5·5	85	5·5	86	5·6	89	5·6	91	5·4	85	5·3	84	5·2	85	5·48	91·4
4·7	76	4·7	78	4·6	79	4·7	82	4·9	91	4·7	86	5·0	91	4·8	87	4·6	84	4·8	89	4·5	86	4·5	89	4·77	83·0
3·7	81	3·4	68	3·3	66	4·1	81	4·0	80	4·0	82	3·9	81	4·1	84	4·4	93	4·5	93	4·8	98	4·8	99	4·19	87·1
3·9	65	4·2	77	4·1	83	4·4	99	3·8	83	4·3	99	3·8	83	3·5	75	3·2	70	3·2	70	3·4	75	3·7	82	4·21	86·4
3·9	80	2·9	67	2·9	69	3·0	74	2·9	74	3·1	79	3·1	78	2·9	77	3·0	79	2·9	79	2·9	81	2·9	84	3·24	76·3
2·9	59	2·7	69	2·7	68	2·6	65	2·5	64	2·5	69	2·2	63	2·4	71	2·1	62	2·3	61	2·9	78	2·8	77	2·54	72·0
4·2	82	4·1	79	4·2	80	4·1	81	4·1	81	4·2	85	4·1	79	4·2	83	4·2	86	4·1	88	4·1	87	3·9	82	4·04	86·2
3·9	86	3·8	84	3·7	81	3·8	90	3·8	95	3·8	92	3·9	96	3·6	87	3·6	89	3·7	91	3·7	93	3·5	90	3·86	89·3
3·8	90	3·5	85	3·4	86	3·2	86	3·2	90	3·2	90	3·3	89	3·0	79	3·1	86	3·3	93	3·3	92	3·2	90	3·43	89·3
4·1	81	4·5	89	4·0	79	4·4	89	4·7	99	4·5	95	4·7	99	4·4	95	4·5	96	4·4	94	4·2	90	4·2	90	3·86	90·8
3·9	78	4·3	83	4·4	87	4·5	96	4·5	96	4·5	97	4·5	98	4·5	96	4·1	89	4·3	93	4·4	99	4·4	99	4·29	92·0
4·1	87	4·0	90	4·1	93	3·9	91	4·0	92	3·9	90	4·0	97	4·0	97	3·9	93	3·9	93	3·7	91	3·8	96	4·06	**93·7**
3·2	74	3·1	74	3·1	74	3·0	73	2·9	72	3·0	75	3·0	76	3·2	81	3·0	82	2·7	75	2·6	73	2·7	75	3·12	80·9
3·2	79	3·3	79	3·4	81	3·5	83	3·8	94	3·3	84	3·4	88	3·2	86	2·9	84	2·9	89	3·1	88	3·2	84	2·97	81·2
4·3	98	4·1	89	4·0	93	4·1	97	4·0	97	3·9	91	3·9	90	3·8	87	3·7	85	3·7	85	3·2	75	3·5	83	3·65	87·2
3·4	85	3·6	88	3·3	79	3·4	79	3·6	84	4·0	91	4·1	91	4·2	91	4·1	89	4·1	89	4·2	91	4·1	87	3·55	83·3
4·4	87	4·3	85	4·4	87	4·4	86	4·3	82	4·4	84	4·3	83	4·3	87	4·4	93	4·4	98	4·7	99	4·7	99	4·39	88·8
2·6	81	2·7	86	2·8	89	2·3	77	2·2	81	2·3	83	2·2	84	2·0	75	2·1	81	2·1	81	2·1	83	1·9	77	3·30	89·4
2·1	72	2·1	73	2·1	77	2·1	80	2·0	77	2·0	77	2·0	76	2·1	78	2·2	80	2·4	81	2·6	83	2·2	71	2·11	77·5
1·8	77	1·7	74	1·6	69	1·5	68	1·6	77	1·5	74	1·5	73	1·4	76	1·3	74	1·4	77	**1·1**	61	1·4	77	**1·75**	74·8
4·11	75·7	4·09	**75·2**	4·01	76·0	4·06	79·2	4·04	82·0	4·04	84·1	4·06	85·5	3·96	84·0	**3·89**	84·3	**3·89**	84·8	3·91	85·3	**3·89**	85·6	4·01	83·6

November 1882. Height of the thermometers

Day.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	m.m.	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*
1	1·2	74	1·0	62	1·0	71	0·9	69	0·9	71	0·9	69	0·9	67	1·1	72	1·2	73	1·2	70	1·0	54	1·2	58
2	1·8	57	1·9	57	2·2	68	2·2	68	2·2	68	2·2	67	2·0	64	2·1	70	2·2	75	2·4	80	2·3	74	2·3	70
3	1·7	66	1·5	58	1·0	42	1·2	53	1·0	52	0·9	54	1·1	70	1·1	67	1·0	64	1·2	73	1·1	61	1·2	63
4	2·1	77	2·4	81	2·4	79	2·6	81	2·6	81	2·7	84	2·8	86	2·9	89	2·7	82	2·7	82	2·4	85	2·0	71
5	0·9	48	1·3	74	1·3	76	1·3	76	1·2	73	1·2	73	1·2	68	1·1	65	1·1	65	1·2	68	1·2	65	1·1	60
6	0·8	68	0·8	66	0·9	68	0·7	54	0·7	62	0·8	67	0·8	67	0·8	67	0·9	66	1·0	71	1·0	66	1·1	70
7	0·8	67	0·8	68	0·7	65	0·5	58	0·5	55	0·4	50	0·4	48	0·4	48	0·4	48	0·4	48	0·5	55	0·5	60
8	0·4	45	0·3	38	0·3	37	0·1	19	0·1	19	0·1	16	0·1	15	0·1	14	0·3	38	0·3	44	0·4	50	0·4	45
9	1·0	70	0·9	66	0·8	66	0·8	68	1·0	89	0·8	68	0·7	65	0·6	64	0·8	67	0·8	68	0·8	64	1·0	72
10	1·3	73	1·4	77	1·3	72	1·3	67	1·4	73	1·4	73	1·5	77	1·6	75	1·7	76	1·5	65	1·1	43	1·1	47
11	2·1	69	2·1	69	2·5	83	2·2	74	2·3	85	2·2	80	1·9	81	1·6	77	2·0	84	1·8	64	1·5	45	1·5	61
12	1·2	73	1·1	71	1·1	71	1·0	70	1·0	72	1·0	70	1·0	72	1·0	72	1·1	73	1·3	73	1·6	75	1·7	79
13	**4·7**	94	4·1	93	4·3	91	4·1	91	3·7	93	2·9	83	2·2	84	2·0	80	2·0	83	1·7	76	1·5	77	1·4	76
14	0·9	67	0·9	67	1·0	72	1·1	71	1·1	72	1·2	75	1·3	73	1·4	77	1·5	77	1·7	78	1·7	79	1·8	80
15	1·7	80	1·9	81	2·0	84	2·1	83	2·1	84	2·3	83	2·7	89	2·6	89	2·5	88	2·4	85	2·5	88	2·1	76
16	2·1	56	2·3	60	2·5	63	2·5	67	3·0	79	3·1	79	3·5	88	3·5	88	3·1	80	3·6	84	3·3	72	3·8	77
17	1·3	74	1·3	76	1·2	73	1·1	73	1·0	70	1·0	72	1·1	73	1·2	73	1·3	73	1·3	75	1·3	74	1·4	77
18	1·7	79	1·8	79	2·1	83	2·1	83	2·1	83	2·0	83	2·0	83	1·9	78	2·2	83	2·2	83	2·2	76	2·6	84
19	2·1	81	2·1	81	2·2	80	2·5	88	2·3	80	2·4	80	2·5	84	2·4	78	2·5	81	2·5	81	2·5	81	2·4	85
20	1·3	74	1·3	74	1·3	74	1·3	73	1·3	74	1·3	76	1·2	72	1·2	74	1·2	75	1·2	75	1·3	70	1·2	62
21	0·8	68	0·8	67	0·9	68	1·0	72	0·8	67	0·8	66	1·0	70	0·9	68	1·1	70	1·2	73	1·4	74	1·2	58
22	0·4	49	0·4	48	0·4	49	0·4	48	0·5	51	0·5	59	0·7	66	0·8	67	0·9	68	1·0	70	1·3	73	1·4	77
23	1·5	77	1·5	77	1·6	76	1·7	79	1·6	77	1·7	79	1·8	80	1·7	73	1·8	79	2·0	83	2·0	82	2·1	83
24	2·0	83	1·8	77	1·9	80	2·0	83	2·0	83	1·8	74	1·7	72	1·7	74	1·6	72	1·5	70	1·6	73	1·7	74
25	1·8	77	1·7	71	1·7	71	1·7	68	1·8	72	2·0	83	1·7	70	1·6	68	1·7	75	1·6	68	1·5	66	1·4	59
26	1·4	73	1·4	73	1·5	77	1·4	75	1·5	77	1·5	77	1·4	71	1·4	72	1·5	73	1·4	68	1·5	72	1·5	72
27	0·7	65	0·7	65	0·4	49	0·4	49	0·4	45	0·4	48	0·4	48	0·4	48	0·3	45	0·3	45	0·3	38	0·3	40
28	0·1	19	0·2	29	0·3	38	0·3	37	0·4	45	0·4	49	0·5	57	0·7	66	0·8	68	0·8	67	0·9	68	1·0	71
29	0·7	65	0·6	60	0·5	57	0·5	57	0·5	57	0·7	65	0·7	65	0·7	65	0·6	60	0·5	57	0·6	59	0·6	60
30	0·1	18	0·1	15	0·1	14	0·1	**9**	0·1	10	0·1	11	0·1	**9**	0·1	10	0·1	11	0·1	11	0·1	10	0·1	**9**
Mean	1·35	66·2	1·35	66·0	1·37	66·6	1·35	65·4	1·37	67·3	1·35	67·1	1·35	67·8	1·35	67·6	1·40	**69·1**	1·42	68·5	1·42	65·6	1·42	65·9

December 1882. $\varphi = +\ 62°\ 38'\ 52''$.

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	m.m.	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*	*m.m.*	*p.c.*
1	0·1	39	0·2	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·4	100	0·4	100	0·4	94	0·5	100
2	0·5	88	0·5	89	0·5	100	0·4	86	0·4	86	0·4	93	0·4	79	0·4	86	0·5	100	0·5	100	0·5	100	0·5	94
3	0·6	70	0·8	96	0·7	92	0·7	100	0·6	100	0·7	100	0·7	87	0·5	78	0·6	82	0·6	87	0·6	91	0·6	86
4	0·3	100	0·3	100	0·3	100	0·3	100	0·4	100	0·4	100	0·3	63	0·3	78	0·4	94	0·4	75	0·5	100	0·4	78
5	0·3	100	0·3	100	0·2	89	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	82
6	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·3	100	0·3	100	0·3	92	0·4	100	0·4	86	0·3	55	0·2	37
7	0·5	100	0·5	100	0·4	94	0·5	100	0·4	82	0·5	94	0·5	100	0·3	73	0·2	41	0·4	100	0·4	100	0·5	100
8	0·6	82	0·6	82	0·5	66	0·6	83	0·6	83	0·6	82	0·6	91	0·5	81	0·5	78	0·5	84	0·4	83	0·5	100
9	0·4	73	0·5	84	0·5	95	0·5	94	0·5	100	0·5	100	0·5	94	0·5	88	0·5	88	0·5	94	0·5	94	0·5	84
10	0·4	100	0·4	100	0·4	100	0·4	100	0·3	100	0·3	100	0·3	100	0·3	100	0·1	35	0·3	100	0·3	100	0·3	100
11	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·4	100
12	0·4	100	0·4	100	0·4	100	0·3	100	0·3	100	0.3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·4	100	0·3	84
13	0·3	100	0·3	100	0·3	100	0·3	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·3	100	0·2	100
14	0·1	70	0·1	70	0·1	56	0·2	100	0·1	89	0·1	56	**0·1**	32	0·1	43	0·1	40	0·2	100	0·1	54	0·2	58
15	0·3	74	0·2	72	0·3	82	0·2	65	0·2	50	0·2	61	0·3	64	0·3	57	0·2	40	0·2	40	0·3	68	0·3	54
16	0·2	38	0·2	50	0·3	84	0·4	92	0·3	59	0·4	79	0·3	85	0·3	63	0·5	100	0·3	68	0·4	64	0·3	50
17	0·7	80	0·7	88	0·7	84	0·7	84	0·7	84	0·6	75	0·8	100	0·8	96	0·7	77	0·5	71	0·6	87	0·7	87
18	0·5	84	0·5	84	0·5	94	0·5	100	0·5	94	0·5	100	0·5	94	0·4	100	0·4	100	0·4	100	0·4	86	0·3	66
19	0·2	100	0·1	62	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100
20	0·2	100	0·2	100	0·2	100	0·2	100	0·1	**19**	0·2	72	0·3	100	0·2	63	0·4	100	0·5	100	0·5	100	0·4	81
21	0·5	100	0·5	78	0·6	100	0·5	80	0·5	76	0·5	73	0·6	87	0·6	83	0·6	72	0·8	100	0·8	92	0·7	92
22	0·7	92	0·6	87	0·7	84	0·7	84	0·8	86	0·9	85	0·8	70	0·9	73	1·0	78	1·0	77	1·0	75	1·1	75
23	1·5	83	1·4	79	1·4	77	1·4	77	1·3	71	1·2	75	1·2	81	1·2	84	1·1	78	1·0	77	0·8	76	0·8	73
24	0·5	81	0·4	76	0·5	100	0·5	100	0·5	100	0·4	88	0·4	100	0·4	100	0·4	100	0·4	100	0·5	100	0·5	94
25	1·3	84	1·3	87	1·2	78	1·2	78	1·2	77	1·2	84	1·1	93	1·0	94	0·8	93	0·9	100	1·0	97	0·9	100
26	1·2	78	1·2	80	1·0	82	0·7	69	1·3	78	1·3	74	1·4	79	1·5	79	1·5	73	1·5	73	1·7	74	1·6	75
27	1·4	74	1·4	70	1·7	85	1·8	86	1·6	69	**1·9**	80	1·7	74	1·5	70	1·5	74	1·3	58	1·6	66	1·5	55
28	1·1	85	1·0	89	0·8	74	0·8	86	0·7	79	0·7	85	0·6	72	0·7	88	0·7	87	0·6	83	0·6	76	0·7	87
29	0.4	86	0·4	100	0·4	100	0·4	100	0·4	100	0·4	100	0·4	100	0·4	100	0·4	100	0·4	100	0·3	58	0·4	87
30	0·5	76	0·6	82	0·6	86	0·6	100	0·6	100	0·6	100	0·6	91	0·6	80	0·7	81	0·9	90	0·8	78	0·9	79
31	0·3	100	0·3	100	0·3	100	0·3	100	0·2	89	0·3	100	0·2	100	0·3	100	0·2	100	0·2	100	0·3	100	0·2	71
Mean	0·50	85·1	0·50	87·3	0·53	90·4	0·53	**92·4**	0·50	86·2	0·53	88·9	0·53	88·3	0·50	85·5	**0·50**	84·2	0·53	89·1	**0·55**	86·1	0.53	81·6

above the ground 1·78 m.

November 1882

1		2		3		4		5		6		7		8		9		10		11		12		Means.	
m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m m..*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
0·8	36	0·8	36	1·2	57	1·4	65	1·5	66	1·5	60	1·5	56	1·6	57	1·6	59	1·4	51	1·8	62	1·8	60	1·21	61·5
2·2	68	2·5	76	2·3	72	1·7	52	1·5	43	1·7	50	2·4	74	2·6	80	2·5	75	2·5	76	2·0	68	1·6	59	2·13	67·1
1·0	53	1·1	53	1·1	55	1·2	59	1·3	59	1·5	68	1·0	46	1·7	74	2·0	83	2·1	83	2·2	83	2·1	77	1·35	63·2
2·2	81	2·0	73	1·9	78	1·8	77	1·6	77	1·3	65	1·5	77	1·5	77	1·4	77	1·3	74	0·9	48	0·9	52	2·00	76·4
1·1	63	1·1	65	1·3	76	1·1	70	1·1	73	1·1	71	1·1	72	1·0	71	0·9	71	0·9	68	0·9	68	0·9	68	1·11	68·6
1·0	61	1·2	74	1·1	73	1·1	72	1·1	72	1·0	72	1·0	71	0·9	67	1·0	72	0·9	70	0·9	67	0·8	60	0·94	67·6
0·6	61	0·7	67	0·5	57	0·6	59	0·5	58	0.7	65	0·5	55	0·4	49	0·5	55	0·4	48	0·3	39	0·4	46	0·50	55·4
0·3	40	0·4	50	0·6	64	0·7	66	0·6	61	0·7	65	0·8	65	0·8	67	0·9	67	0·9	68	0·9	69	0·9	69	0·45	47·1
0·9	65	1·0	66	1·1	73	0·9	70	1·0	70	1·1	70	1·2	73	1·1	71	1·2	74	1·3	76	1·3	74	1·3	74	0·99	70·1
1·5	63	1·8	72	1·5	59	1·7	62	1·8	66	1·6	57	1·9	68	2·1	73	2·3	77	2·1	72	2·2	71	2·3	74	1·62	68·0
2·0	71	1·8	74	1·4	67	1·3	69	1·4	77	1·3	75	1·5	77	1·4	76	1·5	77	1·1	73	1·1	72	1·1	73	1·70	73·0
1·9	76	1·9	78	2·2	76	2·5	78	2·6	81	2·6	84	2·8	79	3·4	81	3·4	84	3·8	84	4·1	91	4·1	83	2·03	76·9
1·2	73	1·1	71	1·0	70	1·0	72	0·8	64	0·8	67	0·7	66	0·6	60	0·6	59	0·5	58	0·7	67	0·8	68	1·85	75·7
1·6	75	1·5	73	1·4	67	1·4	67	1·4	75	1·5	77	1·3	74	1·4	77	1·4	76	1·4	76	1·5	76	1·5	76	1·37	74·0
2·3	82	2·3	83	2·1	83	2·1	78	2·0	78	2·1	83	2·0	83	1·9	80	1·8	68	1·9	66	1·8	53	2·1	56	2·13	79·3
4·1	87	3·7	78	3·3	73	3·0	71	2·7	73	2·7	86	2·1	72	1·9	80	1·7	79	1·5	76	1·4	77	1·2	74	**2·74**	75·8
1·3	73	1·4	77	1·5	72	1·5	76	1·3	73	1·7	79	1·1	63	1·5	76	1·7	80	1·7	80	1·7	79	1·6	77	1·35	74·5
2·3	78	2·3	80	2·1	78	1·9	71	2·1	69	2·3	83	2·3	83	2·2	83	2·2	76	2·2	76	2·2	76	2·1	80	2·11	79·6
2·1	74	1·9	73	1·9	81	1·9	81	1·8	79	1·7	79	1·7	80	1·6	77	1·6	77	1·5	77	1·4	75	1·3	74	2·03	79·5
1·2	64	1·1	50	1·2	72	1·1	72	1·0	71	0·9	69	1·0	72	0·9	67	0·8	68	0·8	67	0·8	67	0·8	67	1·11	70·0
0·9	43	0·7	34	1·0	72	0·8	67	0·8	68	0·7	66	0·6	61	0·6	59	0·5	57	0·5	55	0·4	50	0·4	50	0·81	62·6
1·5	77	1·9	80	1·7	79	1·7	79	1·7	77	1·7	79	1·7	79	1·7	79	1·5	77	1·5	75	1·5	77	1·6	77	1·19	69·2
2·1	83	2·1	83	2·1	83	2·1	83	2·1	83	2·1	83	2·1	83	2·2	84	2·2	85	2·2	83	2·1	82	2·1	83	1·92	**81·0**
1·6	69	1·7	72	1·8	75	1·8	77	1·7	71	1·7	71	1·8	77	1·9	80	1·9	80	1·9	78	1·9	77	1·8	74	1·77	75·7
1·8	77	1·7	77	1·7	77	1·6	73	1·7	79	1·7	79	1·6	79	1·6	77	1·5	77	1·4	76	1·4	75	1·5	77	1·65	73·8
1·5	73	1·5	77	1·4	75	1·4	77	1·3	74	1·1	73	1·0	70	0·9	67	0·9	68	0·8	68	0·7	67	0·7	65	1·27	72·3
0·4	45	0·3	36	0·1	18	0·1	18	0·1	14	0·1	14	0·1	**9**	0·1	12	0·1	10	0·1	13	0·1	14	0·1	17	0·25	33·5
1·1	72	1·1	72	1·0	71	1·1	72	1·1	73	1·1	72	1·0	71	1·0	70	0·9	70	0·8	67	0·7	63	0·7	67	0·73	60·6
0·6	60	0·5	56	0·3	38	0·4	48	0·4	50	0·4	46	0·2	30	0·2	34	0·3	33	0·2	27	0·1	19	0·1	19	0·43	49·5
0·0	10	0·0	10	0·0	12	0·0	12	0·0	12	0·0	11	0·0	11	0·0	11	0·0	11	0·0	12	0·0	12	**0·0**	13	**0·05**	**11·4**
1·45	65·1	1·42	65·5	1·40	66·8	1·35	66·4	1·32	66·2	1·35	67·3	1·32	65·9	1·35	67·2	1·35	67·4	1·32	65·8	1·30	63·9	**1·27**	**63·6**	1·37	66·4

$\lambda = -115^\circ\ 43'\ 50'' = -7$h. 42m. 55s.

December 1882.

1		2		3		4		5		6		7		8		9		10		11		12		Means.	
m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c*	*m. m.*	*p. c.*	*m. m.*	*p. c*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
0·5	94	0·5	94	0·5	100	0·5	95	0·6	100	0·5	80	0·6	100	0·5	80	0·5	90	0·5	79	0·5	84	0·5	89	0·43	92·4
0·6	100	0·6	100	0·6	86	0·8	100	0·7	89	0·7	89	0·7	80	0·7	85	0·7	78	0·7	78	0·6	74	0·5	59	0·55	88·3
0·5	89	0·5	100	0·5	100	0·4	100	0·4	100	0·4	100	0·4	100	0·4	100	0·4	100	0·4	100	0·4	100	0·4	100	0·53	94·1
0·5	78	0·5	78	0·4	78	0·5	100	0·5	100	0·4	100	0·4	100	0·4	100	0·4	100	0·3	100	0·3	100	0·3	100	0·38	92·6
0·3	83	0·3	82	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·1	35	0·2	100	0·25	94·6
0·3	49	0·3	64	0·4	87	0·4	81	0·4	82	0·5	88	0·5	100	0·5	100	0·4	87	0·5	100	0·5	94	0·5	94	0·33	87·3
0·5	100	0·4	81	0·4	93	0·4	87	0·5	94	0·4	77	0·5	84	0·6	95	0·5	81	0·7	96	0·6	87	0·6	87	0·45	89·4
0·4	83	0·5	100	0·4	83	0·5	94	0·5	100	0·5	94	0·5	100	0·5	88	0·4	83	0·5	89	0·6	100	0·6	100	0·50	87·9
0·5	74	0·4	73	0·5	94	0·5	100	0·4	86	0·4	93	0·4	100	0·4	86	0·4	100	0·4	100	0·4	100	0·4	100	0·45	91·4
0·3	100	0·3	100	0·3	100	0·4	100	0·4	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·30	97·3
0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	91	0·4	100	0·4	100	0·33	99·6
0·3	84	0·4	100	0·4	100	0·3	84	0·4	100	0·4	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·33	98·0
0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100
0·2	65	0·3	64	0·3	59	0·3	61	0·3	64	0·3	64	0·3	84	0·3	82	0·2	54	0·2	72	0·2	47	0·2	72	0·20	**100·0**
0·3	65	0·3	73	0·3	73	0·1	30	0·3	68	0·3	68	0·3	62	0·3	68	0·3	56	0·3	68	0·3	74	0·3	59	**0·18**	64·8
0·5	74	0·6	95	0·5	85	0·5	75	0·5	73	0·4	63	0·4	64	0·5	74	0·6	79	0·6	80	0·7	92	0·8	92	0·25	**62·1**
0·8	96	0·6	100	0·6	100	0·5	100	0·5	100	0·5	94	0·5	100	0·6	90	0·7	87	0·7	87	0·6	87	0·3	54	0·43	74·1
0·2	50	0·3	69	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·2	100	0·2	100	0·2	100	0·60	87·8
0·2	100	0·2	74	0·3	82	0·3	83	0·4	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·2	100	0·35	92·5
0·5	100	0·4	81	0·4	87	0·4	80	0·5	94	0·4	86	0·4	100	0·4	100	0·4	100	0·4	100	0·3	100	0·2	67	0·23	94·5
0·5	68	0·7	87	0·6	87	0·7	100	0·7	87	0·5	77	0·7	100	0·7	88	0·7	80	0·7	80	0·7	92	0·4	76	0·35	88·5
1·2	73	1·3	76	1·3	74	1·2	68	1·3	69	1·3	72	1·6	83	1·5	79	1·5	78	1·5	78	1·4	79	0·8	96	0.63	86·5
0·7	65	0·7	80	0·7	81	0·7	92	0·7	92	0·6	91	0·6	100	0·6	95	0·5	89	0·6	100	0·6	100	1·5	80	1·11	78·1
0·4	76	0·4	78	0·5	78	0·5	68	0·7	82	0·8	74	0·8	71	0·8	67	1·0	72	1·0	69	1·1	72	0·7	96	0·91	83·8
1·0	97	0·7	69	0·7	80	1·0	100	0·8	90	0·8	93	0·9	94	1·1	97	1·0	77	1·2	94	1·2	78	1·2	78	0·60	84·3
1·5	65	1·5	73	1·7	83	1·7	83	1·7	81	1·4	75	1·4	68	1·4	77	1·5	82	1·3	71	1·1	77	1·2	78	1·04	88·0
1·5	54	1·7	63	1·6	75	1·4	77	1·2	78	1·5	72	1·3	73	1·2	76	1·1	78	1·2	76	1·5	73	1·6	77	1·42	75·9
0·7	87	0·7	100	0·4	78	0·4	76	0·5	100	0·4	82	0·5	100	0·5	100	0·5	100	0·4	93	1·2	87	1·2	90	**1·45**	73·3
0·4	100	0·4	86	0·4	100	0·5	100	0·5	100	0·5	100	0·5	89	0·6	95	0·6	87	0·5	78	0·4	93	0·4	93	0·60	87·2
0·8	75	0·7	79	0·6	79	0·5	85	0·5	100	0·5	100	0·3	66	0·3	78	0·4	100	0·3	100	0·6	82	0·6	91	0·43	93·3
0·2	64	0·2	59	0·1	30	0·2	100	**0·1**	25	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·3	100	0·3	100	0·55	87·7
0·53	**80·9**	0·53	83·2	0·53	85·5	0·53	87·7	·53	8·8	0·50	88·1	0·53	90·9	0·53	90·3	0·53	88·3	0·53	89·6	0·53	87·6	0·53	88·0	0·23	89·1
																						0·55		0·53	87·2

January 1883. Height of the Thermometers

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
1	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100
2	0·1	100	0·1	76	0·1	84	0·1	92	0·1	76	0·1	76	0·1	100	0·1	40	0·1	50	0·1	50	0·1	60	0·1	78
3	0·1	76	0·1	50	0·1	55	0·1	63	0·1	63	0·1	55	0·1	48	0·1	60	0·1	60	0·1	92	0·1	100	0.2	100
4	0·1	60	0·1	65	0·1	80	0·1	65	0·1	65	0·1	60	0·1	89	0·1	84	0·1	68	0·1	76	0·1	92	0·1	72
5	0·1	80	0·2	100	0·1	37	0·1	44	0·1	37	0·1	50	0·1	46	0·1	46	0·1	50	0·1	60	0·1	67	0·2	100
6	0·1	47	0·1	47	0·2	100	0·1	90	0·1	43	0·1	47	0·1	47	0·1	46	0·1	69	0·1	54	0·2	100	0·2	100
7	0·2	100	0·2	75	0.1	37	0·2	74	0·1	30	0·2	74	0·1	50	0·1	62	0·1	61	0·2	88	0·2	89	0·3	100
8	0·3	75	0·3	77	0·3	78	0·3	64	0·3	57	0·3	62	0·2	45	0·2	47	0·2	68	0·3	71	0·3	65	0·3	74
9	0·3	69	0·3	68	0·3	74	0·3	74	0·3	68	0·4	81	0·3	68	0·3	65	0·4	86	0·3	64	0·3	66	0·4	75
10	0·4	72	0·4	78	0·5	100	0·5	94	0·3	61	0·5	88	0·5	100	0·5	100	0·4	86	0·5	94	0·5	95	0·4	64
11	0·2	54	0·4	100	0·3	77	0·3	71	0·4	94	0·3	69	0·3	51	0·5	94	0·3	61	0·4	68	0·5	79	0·6	91
12	0·2	50	0·1	15	0·3	57	0·3	57	0·1	22	0·2	50	0·4	100	0·3	61	0·3	73	0·4	87	0·5	100	0·5	100
13	0·4	72	0·3	45	0·4	78	0·4	72	0·4	66	0·4	72	0·3	63	0·3	63	0·3	56	0·5	100	0·5	100	0·5	100
14	0·3	100	0·3	82	0·3	75	0·2	71	0·2	80	0·2	51	0·2	89	0·1	40	0·2	65	0·2	71	0·4	100	0·4	80
15	0·2	56	0·3	71	0·2	42	0·3	55	0·4	78	0·1	19	0·4	78	0·4	81	0·3	72	0·4	100	0·3	83	0·3	91
16	0·2	87	0·2	100	0·2	62	0·3	80	0·1	18	0·2	71	0·2	49	0·1	42	0·2	89	0·3	90	0·2	51	0·2	61
17	0·3	100	0·3	100	0·3	90	0·2	80	0·1	50	0·1	35	0·1	32	0·1	43	0·1	51	0·1	51	0·1	40	0·1	29
18	0·1	60	0·1	65	0·1	65	0·1	75	0·1	70	0·1	95	0·1	85	0·1	55	0·1	60	0·1	76	0·1	80	0·2	100
19	0·2	65	0·2	66	0·2	58	0·3	74	0·2	66	0·3	84	0·3	85	0·2	58	0·2	64	0·2	58	0·4	80	0·3	57
20	0·2	58	0·3	74	0·2	63	0·2	72	0·3	81	0·2	58	0·1	21	0·2	89	0·3	90	0·3	90	0·2	55	0·2	40
21	0·1	44	0·2	89	0·2	100	0·1	29	0·1	89	0·1	41	0·2	100	0·1	60	0·2	100	0·2	100	0·2	100	0·2	75
22	0·1	48	0·1	40	0·1	65	0·1	70	0·1	100	0·1	100	0·1	61	0·1	73	0·1	78	0·1	100	0·1	80	0·1	39
23	0·1	65	0·1	65	0·1	60	0·1	50	0·1	64	0·1	64	0·1	68	0·1	82	0·1	68	0·1	54	0·1	47	0·1	44
24	0·1	80	0·1	80	0·1	70	0·1	51	0·1	60	0·1	90	0·1	56	0·1	77	0·2	88	0·2	100	0·3	100	0·3	100
25	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	63	0·3	60
26	0·8	89	0·7	80	0·8	100	0·8	92	0·8	93	0·9	93	0·8	80	0·8	77	1·0	97	0·9	87	1·0	94	1·0	89
27	0·6	95	0·6	91	0·6	87	0·7	87	0·7	88	0·6	74	0·8	89	0·7	78	0·7	79	0·8	83	0·8	78	1·0	94
28	0·8	74	0·9	87	0·8	77	0·7	69	0·8	90	0·8	90	0·8	89	0·8	89	0·7	89	0·7	81	0·7	85	0·6	71
29	0·5	100	0·5	100	0·4	100	0·4	100	0·4	100	0·3	100	0·3	100	0·3	100	0·2	100	0·3	100	0·3	100	0·3	100
30	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·3	100	0·2	44	0·3	76
31	0·3	100	0·3	90	0·2	80	0·2	89	0·1	54	0·3	90	0·2	52	0·3	80	0·2	51	0·2	63	0·2	64	0·2	51
Mean -	0·25	76·6	0·25	76·6	0·25	75·8	0·25	74·3	0·23	69·8	0·25	72·2	0·25	72·3	0·23	70·7	0·25	75·1	0·28	80·9	0·30	79·3	0·30	77·8

February 1883. = +62° 38″ 52″.

Days.	1		2		3		4		5		6		7		8		9		10		11		12	
	m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c,*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
1	0·1	77	0·1	77	0·1	54	0·1	38	0·1	49	0·1	72	0·1	74	0·1	63	0·1	90	0·1	64	0·2	100	0·2	88
2	0·3	91	0·2	62	0·2	62	0·2	68	0·1	40	0·2	87	0·1	34	0·0	17	0·2	100	0·3	100	0·2	66	0·2	71
3	0·9	93	1·0	91	1·0	80	0·8	80	0·7	85	0·6	71	0·6	75	0·5	68	0·5	70	0·5	75	0·5	70	0·5	68
4	0·5	68	0·6	82	0·5	72	0·6	87	0·6	87	0·7	87	0·7	92	0·8	92	0·8	90	1·0	86	1·2	91	1·0	67
5	1·4	80	1·3	84	1·1	78	1·0	66	1·0	66	0·9	58	0·9	56	0·9	58	1·1	71	0·9	58	1·0	56	1·2	65
6	0·5	88	0·5	94	0·5	78	0·5	100	0·5	100	0·5	100	0·5	100	0·4	100	0·5	100	0·5	85	0·5	68	0·5	74
7	1·9	80	1·8	70	1·4	77	1·1	75	1·1	80	1·1	80	0·8	74	0·7	69	0·7	88	0·6	74	0·6	74	0·6	69
8	0·7	96	0·7	96	0·6	79	0·7	87	0·7	87	0·6	75	0·6	86	0·5	81	0·6	86	0·5	81	0·6	83	0·4	48
9	0·9	79	0·8	83	0·8	90	0·7	78	0·7	80	0·7	70	0·9	94	0·9	87	0·9	74	1·1	81	1·3	72	1·0	38
10	0·3	100	0·2	100	0·1	41	0·3	100	0·3	100	0·2	100	0·2	100	0·2	100	0·2	100	0·3	100	0·3	100	0·3	100
11	0·7	85	0·7	100	0·5	80	0·4	73	0·4	73	0·5	100	0·4	82	0·5	100	0·5	100	0·4	78	0·5	94	0·6	95
12	0·4	100	0·4	100	0·4	100	0·4	100	0·3	77	0·4	100	0·4	100	0·4	100	0·3	84	0·3	78	0·3	69	0·4	70
13	0·3	100	0·3	100	0·3	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·3	100	0·3	100	0·3	100	0·3	100
14	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·1	70	0·2	100	0·3	100	0·3	100	0·4	100
15	0·2	100	0·2	100	0·2	100	0·2	100	0·3	100	0·3	100	0·3	100	0·2	77	0·4	100	0·5	100	0·3	60	0·4	59
16	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·4	100	0·4	100	0·3	69	0·5	68	0·4	48
17	0·8	90	0·8	80	0·6	64	0·6	64	0·6	64	0·6	64	0·7	63	0·7	57	0·7	59	0·8	65	0·7	54	0·7	54
18	0·5	88	0·5	94	0·5	100	0·5	100	0·5	100	0·4	82	0·5	100	0·4	100	0·6	100	0·7	96	0·5	58	0·5	47
19	0·6	83	0·7	87	0·6	91	0·7	100	0·7	92	0·8	96	0·6	66	0·7	74	0·7	73	0·7	63	0·7	59	0·7	51
20	0·8	58	0·7	54	0·9	58	0·8	65	0·8	54	0·8	65	0·8	65	0·9	68	1·0	58	1·2	69	0·6	35	0·3	15
21	0·7	75	0·8	80	0·9	94	0·9	93	0·7	89	0·7	100	0·7	100	0·7	87	0·8	100	0·9	93	0·9	87	1·0	91
22	0·8	71	0·9	90	1·0	97	0·8	96	0·7	88	0·8	86	0·8	76	0·9	73	0·9	73	0·9	79	0·8	68	0·9	73
23	0·8	100	0·7	100	0·8	89	0·6	71	0·6	68	0·7	78	0·7	88	0·4	49	0·6	83	0·7	87	0·6	75	0·5	59
24	0·4	100	0·4	100	0·4	100	0·4	100	0·3	100	0·3	100	0·3	100	0·3	100	0·4	100	0·5	100	0·5	94	0·5	79
25	0·6	83	0·6	75	0·6	83	0·7	96	0·7	96	0·6	83	0·5	75	0·7	87	0·7	80	0·8	89	0·8	93	0·9	94
26	0·9	85	0·9	85	0·9	82	0·9	79	0·8	76	0·8	76	0·8	72	0·9	85	1·0	85	0·9	77	1·0	80	0·9	78
27	0·6	95	0·6	86	0·5	76	0·5	76	0·6	100	0·5	85	0·6	90	0·6	95	0·5	76	0·6	87	0·6	82	0·6	87
28	0·6	72	0·7	88	0·7	87	0·6	87	0·7	96	0·6	87	0·6	86	0·5	81	0·6	82	0·5	78	0·6	86	0·6	82
Mean -	0·63	87·0	0·60	87·8	0·58	82·6	0·55	85·0	0·53	83·8	0·53	86·0	0·50	83·9	0·50	79·9	0·58	86·5	0·60	82·6	0·58	76·5	0·58	70·4

above the ground 1·78 m.

January 1883.

1	2	3	4	5	6	7	8	9	10	11	12	Means.
m.m. p.c.	m.m. p.c	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.
0·1 61	0·1 50	0·2 100	0·2 100	0·2 100	0·2 100	0·1 100	0·1 52	0·1 84	0·1 60	0·1 68	0·1 63	0·15 89·1
0·1 44	0·1 58	0·1 53	0·1 67	0·1 56	0·1 40	0·1 44	0·1 44	0·1 68	0·1 52	0·1 100	0·1 100	0·10 67·0
0·1 58	0·1 43	0·1 77	0·1 100	0·1 55	0·1 100	0·1 72	0·1 65	0·1 65	0·1 65	0·1 55	0·1 80	0·08 69·0
0·2 100	0·1 69	0·1 70	0·1 45	0·1 64	0·1 54	0·1 37	0·1 45	0·1 35	0·1 42	0·1 46	0·1 41	0·08 63·5
0·1 40	0·1 35	0·1 37	0·1 29	0·1 78	0·2 100	0·1 70	0·1 47	0·1 80	0·1 90	0·1 69	0·1 60	0·10 60·5
0·2 100	0·1 49	0·1 36	0·2 63	0·1 62	0·2 75	0·2 75	0·2 75	0·1 37	0·1 36	0·1 31	0·2 87	0·13 63·2
0·3 100	0·2 62	0·3 80	0·2 71	0·2 50	0·2 50	0·3 90	0·2 68	0·1 45	0·3 90	0·3 80	0·3 82	0·18 71·2
0·3 69	0·4 81	0·4 81	0·4 75	0·3 68	0·3 56	0·4 86	0·2 41	0·3 71	0·3 73	0·4 80	0·2 50	0·28 67·3
0·2 36	0·4 76	0·3 64	0·3 73	0·4 92	0·0 4	0·3 64	0·3 85	0·3 70	0·3 71	0·3 67	0·4 70	0·30 67·9
0·3 45	0·3 45	0·3 61	0·3 74	0·3 53	0·3 85	0·3 78	0·3 78	0·3 85	0·2 45	0·3 72	0·3 63	0·35 75·7
0·5 72	0·5 68	0·4 59	0·3 49	0·4 63	0·6 82	0·5 72	0·5 70	0·5 75	0·5 72	0·5 89	0·3 52	0·40 72·2
0·6 100	0·5 100	0·3 74	0·3 61	0·3 68	0·2 48	0·2 47	0·3 62	0·3 57	0·4 76	0·3 47	0·3 59	0·30 65·5
0·5 89	0·4 83	0·4 78	0·3 64	0·3 59	0·4 70	0·4 81	0·4 81	0·5 94	0·3 92	0·4 100	0·1 16	0·38 74·8
0·2 44	0·3 65	0·3 83	0·3 100	0·3 90	0·2 71	0·2 48	0·2 80	0·2 71	0·2 63	0·2 40	0·2 54	0·23 71·4
0·3 90	0·2 66	0·1 52	0·2 87	0·2 100	0·2 100	0·1 63	0·2 100	0·2 100	0·2 100	0·1 33	0·2 100	0·23 75·7
0·1 27	0·1 16	0·1 42	0·3 100	0·3 100	0·2 77	0·1 41	0·2 62	0·2 71	0·2 79	0·3 100	0·3 90	0·20 66·9
0·1 26	0·1 27	0·1 48	0·1 52	0·1 59	0·1 68	0·1 73	0·1 65	0·1 68	0·1 65	0·1 65	0·1 65	0·10 57·6
0·1 49	0·1 36	0·1 21	0·1 28	0·1 30	0·2 100	0·1 38	0·1 33	0·2 60	0·2 72	0·2 62	0·1 35	0·10 60·4
0·3 48	0·2 46	0·3 53	0·2 38	0·1 24	0·2 47	0·3 84	0·3 84	0·4 100	0·1 27	0·3 82	0·3 75	0·25 63·5
0·2 47	0·1 21	0·1 42	0·2 66	0·3 100	0·3 100	0·1 36	0·1 25	0·1 50	0·2 100	0·1 22	0·1 38	0·18 59·9
0·2 88	0·2 87	0·1 49	0·1 65	0·1 21	0·1 60	0·1 69	0·1 49	0·1 70	0·1 52	0·1 37	0·1 46	0·13 67·5
0·1 27	0·1 24	0·1 100	0·1 60	0·1 80	0·1 70	0·1 55	0·1 72	0·1 73	0·1 48	0·1 70	0·1 65	0·08 66·6
0·1 33	0·1 23	0·1 27	0·1 50	0·1 91	0·1 35	0·1 59	0·1 54	0·1 66	0·1 67	0·1 65	0·1 52	0·08 56·4
0·2 78	0·3 100	0·2 89	0·2 65	0·2 66	0·3 100	0·2 58	0·3 80	0·3 77	0·3 73	0·2 47	0·2 70	0·18 77·3
0·2 29	0·2 29	0·5 94	0·5 84	0·6 100	0·6 95	0·6 87	0·6 78	0·6 83	0·7 80	0·7 80	0·8 100	0·40 85·9
1·1 90	1·0 83	0·8 65	1·2 100	0·9 93	0·8 93	0·7 84	0·8 100	0·6 100	0·7 100	0·7 100	0·7 100	0·84 90·8
0·8 71	0·9 79	0·9 82	0·8 74	0·8 68	0·8 74	1·0 88	1·0 88	0·9 82	1·0 97	0·8 75	0·9 85	0·79 82·8
0·6 66	0·7 77	0·7 81	0·7 84	0·7 92	0·7 92	0·7 88	0·7 87	0·6 87	0·6 100	0·6 100	0·5 100	0·68 85·2
0·3 81	0·3 100	0·2 58	0·2 100	0·2 100	0·2 100	0·2 100	0·2 100	0·2 100	0·3 100	0·3 100	0·2 100	0·28 97·5
0·1 22	0·1 10	0·1 41	0·3 100	0·3 100	0·3 100	0·3 100	0·3 100	0·3 100	0·3 100	0·3 100	0·3 100	0·20 87·2
0·2 46	0·2 59	0·3 74	0·2 62	0·3 80	0·2 89	0·2 88	0·1 32	0·1 48	0·2 100	0·2 100	0·1 64	0·20 71·1
0·25 60·5	0·25 57·0	0·25 63·6	0·25 70·5	0·25 73·0	0·25 75·3	0·25 70·2	0·25 67·8	0·25 73·3	0·25 73·8	0·25 70·4	0·23 6·97	0·25 71·9

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s.

February 1883.

1	2	3	4	5	6	7	8	9	10	11	12	Means.
m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.	m.m. p.c.
0·3 80	0·3 100	0·1 40	0·1 40	0·2 66	0·2 89	0·2 79	0·3 90	0·3 80	0·3 90	0·2 62	0·2 72	0·18 72·3
0·2 71	0·2 58	0·1 35	0·3 100	0·2 89	0·3 50	0·2 71	0·3 82	0·3 82	0·5 100	0·6 95	0·6 75	0·23 72·3
0·5 69	0·3 35	0·3 54	0·3 62	0·3 73	0·3 62	0·4 64	0·5 100	0·3 63	0·4 75	0·4 73	0·5 79	0·50 72·3
1·3 56	1·6 61	1·4 53	1·7 74	1·8 72	1·6 75	1·7 79	1·6 68	1·6 74	1·7 79	1·5 77	1·4 76	1·16 76·9
1·3 72	0·9 50	1·0 69	0·8 56	0·6 45	0·6 66	0·8 96	0·7 96	0·7 100	0·6 100	0·6 90	0·6 95	0·91 72·1
0·5 65	0·6 72	0·7 85	0·7 80	0·8 92	0·8 96	0·7 73	0·7 80	1·7 75	1·9 73	1·9 71	1·1 41	0·73 82·9
0·5 57	0·5 55	0·5 62	0·5 82	0·6 100	0·5 95	0·5 100	0·4 93	0·4 100	0·5 100	0·7 100	0·7 96	0·76 81·5
0·7 87	0·7 87	0·7 92	0·6 87	0·7 100	0·9 100	0·9 97	1·0 100	0·8 84	0·8 68	0·8 70	0·9 78	0·68 84·8
1·4 70	1·4 79	1·4 87	1·1 75	0·9 82	0·8 90	0·6 82	0·6 100	0·4 88	0·4 100	0·4 100	0·3 100	0·84 82·5
0·4 100	0·4 100	0·4 86	0·4 100	0·3 73	0·4 93	0·4 87	0·5 100	0·4 70	0·6 100	0·6 91	0·7 100	0·33 93·4
0·5 70	0·6 100	0·4 83	0·4 83	0·5 88	0·4 94	0·4 100	0·5 100	0·4 100	0·3 85	0·4 100	0·3 85	0·48 89·5
0·4 66	0·4 66	0·4 70	0·4 93	0·5 100	0·5 100	0·4 80	0·4 93	0·4 100	0·4 100	0·3 100	0·3 100	0·38 89·4
0·4 100	0·4 100	0·4 100	0·3 100	0·3 100	0·3 100	0·3 100	0·3 100	0·3 100	0·4 100	0·3 100	0·2 100	0·28 100·0
0·4 100	0·5 100	0·2 50	0·2 46	0·3 100	0·3 100	0·3 100	0·3 100	0·3 100	0·2 100	0·2 100	0·2 100	0·23 92·3
0·3 37	0·5 75	0·3 55	0·5 100	0·4 100	0·4 100	0·4 100	0·3 100	0·4 100	0·3 100	0·3 100	0·3 100	0·33 90·1
0·4 44	0·5 52	0·5 54	0·5 55	0·5 63	0·5 63	0·5 61	0·8 86	0·7 64	0·6 59	0·7 79	0·6 72	0·45 76·5
0·7 50	0·8 63	0·8 62	0·7 58	0·8 77	0·6 66	0·7 87	0·6 87	0·6 100	0·5 100	0·4 100	0·4 100	0·65 72·0
0·5 49	0·7 64	0·6 61	0·6 64	0·7 82	0·8 100	0·6 79	0·6 79	0·6 79	0·6 72	0·6 72	0·5 66	0·55 80·5
0·7 49	0·6 39	0·6 47	0·7 65	0·7 68	0·7 69	0·7 80	0·8 68	0·8 62	0·8 64	0·8 65	0·8 61	0·70 69·7
0·4 16	0·5 15	0·5 17	0·7 34	0·7 41	0·7 47	0·7 54	0·8 55	0·7 56	0·8 80	0·7 63	0·5 61	0·70 50·1
0·9 77	0·8 68	0·9 78	0·8 67	1·0 76	1·0 74	1·0 67	1·0 66	1·1 72	1·1 83	1·1 90	1·0 82	0·89 82·9
1·0 76	1·0 73	1·0 73	0·9 71	0·9 70	0·9 70	1·0 72	1·0 74	0·9 70	0·8 71	0·9 85	0·9 97	0·89 78·0
0·5 55	0·4 45	0·5 55	0·6 80	0·5 85	0·6 100	0·5 100	0·5 100	0·5 100	0·5 100	0·4 100	0·4 100	0·55 82·0
0·5 75	0·3 38	0·3 37	0·5 79	0·5 89	0·6 100	0·5 84	0·5 84	0·5 84	0·5 90	0·5 76	0·6 79	0·43 87·0
0·7 57	0·8 63	0·8 71	0·8 81	0·8 74	0·8 78	0·8 75	0·9 82	0·9 85	0·9 82	0·9 82	0·9 88	0·76 81·3
1·0 86	1·0 80	1·0 82	0·9 91	0·8 81	0·8 90	0·7 80	0·6 80	0·7 96	0·7 100	0·6 82	0·6 91	0·84 83·3
0·7 81	0·7 75	0·7 78	0·7 81	0·7 80	0·7 84	0·7 80	0·7 80	0·6 72	0·7 80	0·7 88	0·7 80	0·60 83·1
0·6 82	0·6 87	0·6 82	0·6 82	0·6 82	0·6 90	0·5 100	0·3 74	0·4 100	0·4 100	0·4 92	0·4 100	0·53 86·8
0·60 67·8	0·63 67·9	0·60 64·9	0·63 74·5	0·60 80·3	0·63 85·0	0·60 83·1	0·60 85·9	0·63 84·1	0·63 87·5	0·63 84·0	0·58 84·8	0·58 80·9

March 1883. Height of the Thermometers

Day.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
1	0·3	92	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·4	100	0·4	100	0·5	100
2	0·5	90	0·5	95	0·4	83	0·5	100	0·5	100	0·4	86	0·4	94	0·5	100	0·6	100	0·5	81	0·7	100	0·6	82
3	0·4	100	0·4	100	0·4	100	0·3	100	0·3	100	0·3	100	0·3	100	0·4	100	0·4	100	0·5	94	0·4	70	0·3	57
4	0·1	34	0·3	100	0·2	100	0·3	100	0·2	100	0·2	100	0·2	100	0·2	100	0·3	100	0·3	100	0·4	100	0·2	43
5	0·3	100	0·3	100	0·3	100	0·3	100	0·2	100	0·2	100	0·2	100	0·3	100	0·3	100	0·4	100	0·3	47	0·1	15
6	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·4	100	0·4	100	0·2	42	0·5	88	0·5	84	0·5	73
7	0·6	83	0·5	76	0·5	85	0·5	76	0·5	76	0·5	76	0·5	78	0·7	80	0·6	64	0·7	65	0·7	66	1·0	88
8	0·7	100	0·8	93	1·0	91	1·0	94	0·6	59	0·6	61	0·9	79	0·9	79	1·0	80	0·8	59	0·8	58	0·9	64
9	0·8	100	0·3	44	0·6	90	0·6	86	0·5	80	0·5	85	0·5	84	0·7	100	0·8	100	0·7	80	0·8	67	0·8	64
10	0·9	97	0·7	75	0·6	68	0·8	83	0·8	86	0·8	83	0·7	80	0·8	83	1·0	100	1·0	91	1·1	90	1·0	76
11	0·9	54	1·1	87	0·9	70	1·1	97	1·1	83	1·2	87	1·1	75	1·1	78	1·2	75	1·1	73	1·1	69	1·1	71
12	0·7	70	0·7	69	1·0	91	0·9	88	0·9	94	0·8	81	0·9	82	1·0	88	0·9	79	1·0	82	1·1	80	1·2	78
13	1·2	80	1·4	81	1·2	73	1·1	75	1·0	77	0·9	73	0·9	80	1·1	84	1·2	87	1·2	75	0·9	54	1·0	52
14	0·4	78	0·4	82	0·4	81	0·5	100	0·4	80	0·4	100	0·5	100	0·6	91	0·9	100	0·1	13	0·8	100	0·8	100
15	0·5	95	0·5	79	0·5	100	0·5	100	0·4	100	0·4	93	0·5	89	0·5	84	0·5	74	0·6	71	0·5	57	0·6	57
16	0·8	72	0·8	73	0·7	66	0·7	69	0·7	70	0·8	86	0·7	82	0·6	76	0·6	66	0·6	67	0·6	73	0·7	81
17	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·2	100	0·3	100	0·2	67	0·4	86
18	0·3	64	0·4	100	0·3	75	0·4	100	0·3	100	0·3	100	0·4	100	0·6	100	0·6	100	0·4	51	0·5	62	0·3	31
19	0·3	84	0·3	85	0·4	92	0·3	66	0·4	81	0·4	82	0·4	69	0·5	69	0·6	79	0·6	59	0·6	64	0·8	68
20	0·9	74	0·9	74	0·8	74	0·8	74	0·7	71	0·9	82	1·0	80	0·9	70	1·0	61	1·0	64	0·9	54	0·8	43
21	0·6	83	0·7	92	0·5	85	0·6	100	0·5	100	0·5	100	0·6	100	0·8	100	0·6	72	0·6	61	0·6	53	0·6	51
22	0·6	61	0·8	86	0·6	83	0·6	82	0·5	90	0·7	92	0·7	73	0·7	70	0·9	82	0·6	58	0·6	46	0·6	47
23	0·4	100	0·4	100	0·4	100	0·4	100	0·4	100	0·3	100	0·3	100	0·5	100	0·3	41	0·4	73	0·4	62	0·4	53
24	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·3	100	0·4	100	0·5	100	0·5	100	0·3	59	0·2	37	0·3	47
25	0·4	100	0·4	100	0·4	100	0·3	100	0·4	100	0·3	100	0·4	100	0·4	100	0·5	100	0·6	100	0·6	83	0·8	89
26	0·5	88	0·5	94	0·5	100	0·4	70	0·4	100	0·4	100	0·5	100	0·5	100	0·7	100	0·6	87	0·7	89	0·8	83
27	0·6	82	0·5	81	0·6	90	0·6	90	0·6	90	0·6	95	0·7	100	0·8	100	0·8	93	0·6	62	0·8	68	0·8	65
28	0·6	83	0·6	83	0·5	81	0·4	100	0·6	100	0·6	90	0·8	100	0·8	100	0·9	93	0·7	63	0·7	57	0·6	36
29	0·7	88	0·7	92	0·7	89	0·7	87	0·7	92	0·7	100	1·0	100	1·0	97	0·9	68	0·8	55	0·6	42	0·9	56
30	0·7	89	0·6	86	0·6	100	0·4	83	0·6	90	0·5	100	0·6	100	0·8	86	0·7	59	0·9	77	0·8	67	0·8	57
31	0·4	69	0·5	100	0·5	100	0·5	100	0·5	100	0·6	100	0·6	100	0·5	67	0·8	64	0·4	31	1·0	72	1·1	72
Mean -	0·55	84·2	0·55	88·0	0·53	89·3	0·53	91·0	**0·50**	90·9	**0·50**	**92·0**	0·55	91·8	0·63	90·4	0·65	83·2	0·60	72·2	0·65	69·0	0·68	64·0

April 1883. $\varphi = +\ 62°\ 38'\ 52''$

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
1	0·8	89	0·7	66	0·8	67	1·1	96	0·9	76	0·9	71	1·4	100	1·2	97	1·2	83	1·0	70	1·1	70	1·3	66
2	1·1	96	0·9	94	0·8	80	0·8	84	0·9	90	0·8	90	0·9	80	1·0	78	1·1	66	1·1	60	1·2	63	1·4	63
3	1·4	76	1·6	82	1·3	74	1·2	72	1·1	73	1·1	77	1·1	72	1·1	75	1·1	73	1·0	64	0·9	53	1·1	58
4	0·7	96	0·8	96	0·6	91	0·6	87	0·5	75	0·7	78	0·8	86	0·8	65	0·8	51	0·5	31	1·0	69	0·5	27
5	0·9	100	0·8	93	0·7	100	0·7	100	0·7	100	**0·3**	100	0·7	100	0·8	93	0·9	100	0·9	77	1·0	77	1·1	72
6	1·0	83	1·0	89	0·9	82	0·9	74	0·7	54	0·9	71	0·9	60	0·7	38	0·6	36	0·9	51	0·8	37	0·8	34
7	0·7	67	0·6	72	0·8	89	0·7	88	0·7	92	0·7	100	1·1	97	0·5	42	1·1	72	0·9	51	0·8	36	0·8	35
8	0·9	68	0·8	74	0·9	85	1·0	90	0·7	73	0·9	88	1·1	94	1·0	79	0·9	63	0·7	47	0·7	43	0·6	33
9	1·1	92	1·1	86	1·1	83	1·1	83	1·1	80	1·1	74	1·1	73	1·3	76	1·4	74	0·6	27	0·8	31	0·9	33
10	1·4	70	1·3	74	1·5	97	1·0	72	1·1	86	1·3	94	1·1	72	1·5	97	1·6	89	1·5	80	1·5	69	1·8	71
11	1·1	70	1·1	70	1·2	73	1·2	65	1·2	66	1·4	76	1·2	58	1·2	53	1·3	54	1·2	44	1·4	50	1·3	41
12	1·7	92	1·6	82	1·4	77	1·2	78	1·6	92	1·4	77	1·3	61	1·3	50	1·4	51	1·4	51	1·7	49	1·7	46
13	1·2	55	1·2	57	1·2	62	1·2	63	1·4	73	1·1	58	1·2	55	1·7	73	1·7	68	1·6	59	1·8	59	2·1	65
14	1·1	78	1·0	75	1·1	90	1·1	97	1·2	100	1·2	100	1·2	96	1·2	84	1·0	63	1·0	57	1·1	51	1·1	49
15	1·3	69	1·2	60	1·1	57	1·3	66	1·5	78	1·6	86	1·4	66	1·7	77	1·5	58	1·8	63	2·0	64	2·3	63
16	1·6	97	1·4	93	1·2	84	1·2	97	1·2	97	1·4	100	1·5	100	1·2	68	1·1	46	1·1	47	1·2	43	1·4	42
17	1·6	83	1·5	100	1·2	75	1·2	87	1·4	100	1·5	100	1·5	86	1·2	57	1·2	52	1·2	48	1·3	42	1·6	44
18	1·5	71	1·7	86	1·4	67	1·8	100	1·2	73	1·7	90	1·3	61	1·2	57	1·3	56	1·4	45	1·5	43	1·8	52
19	1·3	59	1·1	57	1·3	69	1·3	74	1·2	66	1·4	70	1·3	54	1·5	58	1·5	56	1·5	47	2·1	61	2·7	70
20	1·7	70	1·7	67	1·6	74	1·6	78	1·4	65	1·8	71	1·6	60	2·0	62	2·3	57	2·7	64	3·6	72	3·5	63
21	4·5	97	4·6	97	4·7	99	4·6	98	4·6	98	4·6	99	4·7	98	4·8	99	4·8	99	4·8	98	4·8	95	4·8	99
22	4·7	97	4·7	99	4·8	99	4·7	99	4·4	98	4·5	99	4·2	100	3·0	76	2·7	70	2·5	66	2·4	62	2·5	61
23	1·9	63	1·7	62	1·7	66	1·8	74	1·7	70	1·7	70	1·9	70	1·7	60	2·3	76	1·7	54	2·1	63	2·6	71
24	2·1	83	1·9	74	2·0	78	2·2	83	2·1	83	2·1	78	2·5	80	2·6	73	3·4	81	3·7	82	3·8	75	4·5	85
25	3·2	84	3·1	84	3·3	89	2·9	83	2·9	89	3·7	93	3·4	86	3·8	84	3·7	71	4·8	84	4·8	84	5·0	86
26	3·4	86	2·9	77	3·2	82	2·8	81	3·2	82	3·5	82	3·6	67	4·8	84	4·6	77	4·7	74	4·9	75	4·9	75
27	3·3	71	3·1	73	2·9	75	2·8	75	3·2	82	3·6	85	3·5	77	4·3	87	4·2	78	4·5	76	4·5	78	4·5	76
28	3·9	86	4·0	87	4·1	90	4·1	90	4·1	89	4·1	87	4·0	82	3·9	76	3·8	72	4·1	81	4·0	79	4·2	78
29	4·1	80	4·1	80	3·9	80	4·6	88	4·0	91	3·4	78	3·6	81	3·7	81	3·7	79	3·5	66	3·5	64	3·8	70
30	2·8	81	3·1	88	3·1	92	3·5	100	2·9	90	2·0	65	1·8	57	1·9	55	2·2	59	2·5	67	3·0	76	3·5	80
Mean -	1·92	80·3	1·87	79·8	1·85	80·9	1·87	**84·1**	**1·82**	82·7	1·87	83·6	1·87	77·6	1·95	71·8	2·00	68·0	2·03	61·0	2·18	61·1	2·33	60·3

above the ground 1·78 m.

March 1883.

1	2	3	4	5	6	7	8	9	10	11	12	Means.
m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.
0·6 100	0·6 100	0·6 100	0·5 100	0·5 79	0·6 100	0·6 100	0·6 91	0·6 87	0·6 90	0·5 85	0·6 95	0·45 **96·6**
0·5 73	0·4 56	0·5 75	0·5 78	0·4 88	0·5 100	0·4 93	0·3 78	0·4 86	0·4 100	0·4 100	0·4 100	0·48 89·1
0·5 74	0·4 56	0·4 60	0·5 76	0·5 100	0·4 100	0·4 100	0·3 74	0·3 100	0·3 100	0·3 100	0·3 100	0·35 90·0
0·4 87	0·4 76	0·6 100	0·5 100	0·5 100	0·5 100	0·4 100	0·4 100	0·4 100	0·4 100	0·3 100	0·3 100	0·33 93·0
0·2 29	0·1 13	**0·1 7**	0·5 76	0·5 89	0·4 93	0·4 93	0·4 100	0·4 100	0·4 100	0·3 100	0·3 91	0·33 93·0
0·6 76	0·7 85	0·6 70	0·6 74	0·6 80	0·7 75	0·8 89	0·7 70	0·7 67	0·8 90	0·8 92	0·7 92	**0·28** 81·8
0·8 71	0·8 74	0·7 66	0·7 69	0·8 74	0·9 73	1·0 85	0·9 82	1·0 97	0·9 94	0·7 82	0·6 79	0·53 85·3
0·9 56	0·8 47	0·7 45	0·8 48	0·6 37	0·8 67	0·8 78	0·7 73	0·6 68	0·6 66	0·3 31	0·7 88	0·70 77·5
0·8 57	1·0 69	0·9 66	0·8 58	0·8 70	0·9 84	0·8 89	0·6 68	0·8 86	0·7 76	0·8 90	0·8 90	0·76 67·5
1·0 72	1·1 75	1·1 75	1·3 87	1·3 84	1·3 76	1·3 74	1·4 74	**1·5** 77	1·2 71	1·2 73	1·3 66	0·70 78·5
1·0 64	1·1 66	1·1 67	1·2 75	1·1 74	1·0 82	0·9 73	1·0 88	0·8 83	1·0 85	0·8 74	0·8 90	1·04 79·8
1·3 84	1·3 81	1·1 78	1·3 81	1·2 77	1·2 81	1·1 75	1·1 78	1·3 97	1·2 90	1·2 87	1·3 97	1·04 76·7
0·9 42	1·0 48	0·7 42	0·8 51	0·8 67	1·0 86	0·6 72	0·6 87	0·7 100	0·6 90	0·6 95	0·5 90	**1·06** 82·8
0·6 72	0·7 82	0·7 79	0·7 81	0·7 89	0·6 83	0·6 86	0·6 95	0·5 95	0·6 95	0·5 89	0·5 94	0·91 73·4
0·7 62	0·6 51	0·6 44	0·7 59	0·7 57	0·8 67	0·8 67	0·8 67	0·8 68	0·8 67	0·8 74	0·9 82	0·55 86·0
0·6 69	0·6 83	0·4 52	0·4 54	0·4 68	0·3 68	0·3 78	0·3 92	0·2 71	0·3 100	0·3 100	0·2 100	0·63 73·5
0·3 74	0·4 67	0·4 63	0·4 64	0·3 40	0·3 62	0·3 84	0·4 100	0·3 92	0·3 92	0·4 100	0·4 100	0·53 75·7
0·5 46	0·5 46	0·4 38	0·4 46	0·3 28	0·4 50	0·4 62	0·5 74	0·4 75	0·4 100	0·4 100	0·4 100	**0·28** 87·1
0·6 50	0·7 54	0·8 67	0·7 51	0·8 62	0·7 63	1·0 88	0·8 67	0·9 66	0·8 66	0·8 69	0·9 71	0·38 72·8
0·7 36	0·7 34	0·7 41	0·7 38	0·6 38	0·8 58	0·8 64	0·7 73	0·8 86	0·7 69	0·6 66	0·8 86	0·63 69·7
0·5 34	0·4 25	0·6 45	0·6 46	0·5 42	0·6 57	0·6 63	0·5 61	0·8 100	0·5 61	0·7 88	0·6 69	0·79 **62·9**
0·6 44	0·7 46	0·6 45	0·6 47	0·5 39	0·6 64	0·7 78	0·5 67	0·5 68	0·5 100	0·5 100	0·4 100	0·58 70·3
0·4 47	0·4 47	0·4 42	0·4 41	0·4 39	0·4 48	0·5 75	0·3 57	0·4 68	0·5 94	0·4 100	0·2 65	0·60 69·5
0·6 87	0·5 68	0·7 84	0·7 88	0·5 68	0·5 63	0·4 77	0·3 64	0·3 64	0·3 74	0·4 94	0·5 100	0·38 73·1
0·7 80	0·8 77	0·9 90	0·7 74	0·7 67	1·0 97	0·6 83	0·6 95	0·5 95	0·5 84	0·5 94	0·4 83	0·40 82·3
0·7 73	0·7 73	0·8 77	0·7 73	0·9 78	1·0 100	0·8 100	0·8 100	0·7 100	0·6 95	0·1 11	0·7 100	0·55 91·3
0·7 48	0·6 40	0·9 56	0·9 63	0·5 35	0·8 67	0·6 60	0·8 89	0·6 59	0·8 96	0·7 78	0·7 88	0·60 87·1
0·5 25	0·5 26	0·5 22	0·6 23	0·6 24	0·9 53	0·8 48	0·7 54	0·9 87	0·8 74	0·6 54	0·6 76	0·68 74·8
0·7 40	0·7 33	0·8 38	0·9 46	1·0 57	1·1 71	1·0 70	0·9 68	0·8 67	0·9 90	0·8 90	0·7 88	0·65 64·7
0·9 54	1·0 58	1·1 68	1·1 69	1·0 67	0·8 57	0·9 69	0·8 63	0·7 81	0·6 62	0·8 74	0·7 84	0·81 71·8
0·7 37	0·7 35	0·9 42	0·5 24	0·7 32	0·9 50	0·8 52	0·9 71	0·8 65	0·9 71	0·7 77	0·7 73	0·76 75·0
0·65 60·1	0·65 **57·8**	0·68 59·5	0·70 63·3	0·65 62·9	**0·73** 74·0	0·68 78·2	0·65 78·1	0·65 82·4	0·65 85·2	0·58 82·8	0·60 88·3	0·68 7·83

λ = — 115° 43′ 50″ = — 7h. 42m. 55s.

April 1883.

1	2	3	4	5	6	7	8	9	10	11	12	Means.
m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.
1·2 54	1·1 46	1·1 51	1·2 53	1·4 68	1·3 72	1·3 76	1·3 84	1·1 78	1·0 80	1·1 93	0·9 80	1·09 74·4
1·3 58	1·5 63	1·4 61	1·4 66	1·4 73	1·4 73	1·1 55	1·3 71	1·4 70	1·4 71	1·3 62	1·4 77	1·19 72·7
1·1 56	1·0 50	1·0 50	1·0 57	1·0 53	1·1 67	1·1 83	1·1 96	0·9 88	0·9 93	0·8 96	0·7 79	1·06 71·5
0·6 29	0·6 29	0·6 26	0·5 26	0·6 31	0·8 50	0·8 70	0·7 58	0·7 69	0·9 85	0·8 90	0·7 89	**0·70** 62·7
1·1 66	1·0 54	1·0 57	1·2 65	1·1 61	0·9 58	0·9 59	0·8 48	0·8 47	0·9 72	0·8 61	0·9 73	0·89 76·4
0·6 27	0·6 27	0·6 27	0·8 37	1·4 74	1·4 77	1·1 63	1·2 73	1·2 78	1·0 72	1·0 72	1·0 94	0·91 59·6
0·8 30	0·6 **21**	1·0 32	1·0 30	0·8 31	0·9 38	0·9 40	0·9 44	1·0 48	1·1 63	1·2 73	1·0 70	0·86 **56·7**
0·7 37	0·7 36	0·8 37	0·9 42	1·1 58	1·0 59	0·9 58	1·0 72	1·1 83	1·0 77	1·1 94	1·1 93	0·89 66·0
1·0 34	0·9 31	1·5 38	0·9 26	1·3 38	1·2 37	1·4 50	1·2 53	1·4 61	1·4 62	1·4 60	1·4 63	1·14 56·9
1·6 66	1·6 61	1·6 61	1·5 57	1·4 54	1·3 54	1·2 58	1·3 72	1·2 73	1·1 70	1·1 67	1·1 72	1·35 72·3
1·2 34	1·5 42	2·0 52	2·4 66	2·1 59	1·7 51	1·6 49	1·8 60	1·4 59	1·4 58	1·7 79	1·6 92	1·47 59·2
1·9 48	1·9 51	2·1 54	2·6 61	2·0 48	1·7 45	1·6 52	1·5 56	1·7 72	1·1 48	1·2 46	1·2 50	1·57 59·9
2·2 60	2·1 59	2·0 53	2·0 56	1·8 54	1·8 55	1·5 53	1·3 56	1·4 65	1·4 73	1·5 100	1·2 76	1·55 62·8
1·0 38	1·0 34	1·0 30	1·5 49	1·6 51	1·4 56	1·3 58	1·4 71	1·6 92	1·3 76	1·3 72	1·4 82	1·21 68·7
1·9 47	2·7 59	3·0 65	3·0 70	2·4 58	2·2 57	2·3 64	2·2 68	2·0 68	1·7 65	1·9 100	1·5 76	1·90 66·8
1·7 48	2·2 53	3·1 62	3·6 74	2·5 54	2·9 64	2·6 66	2·3 64	2·2 66	2·0 68	2·2 83	1·8 79	1·85 70·6
2·1 53	3·0 62	2·9 58	3·4 68	3·2 66	2·7 59	2·1 55	1·8 52	1·2 40	1·4 44	2·1 90	1·8 79	1·85 66·7
1·9 53	1·7 45	2·3 56	2·2 51	2·2 58	1·9 56	2·0 73	1·8 74	1·6 57	1·2 41	1·2 44	1·5 63	1·62 61·3
3·2 71	3·7 78	3·8 79	3·8 79	3·5 80	3·0 77	2·6 76	2·2 74	2·0 71	1·9 74	1·8 77	1·8 77	2·16 68·9
4·4 79	4·1 75	4·1 72	4·0 75	4·4 93	4·5 96	4·6 98	4·7 99	4·6 97	4·7 99	4·5 95	4·6 98	3·27 78·3
4·8 98	4·8 99	4·8 95	4·8 97	4·6 95	4·8 98	4·7 94	4·6 96	4·6 96	4·6 97	4·6 97	4·6 97	**4·70 97·3**
2·8 65	2·8 65	2·8 66	2·8 66	2·6 63	2·3 60	2·1 61	2·1 60	2·3 67	1·9 57	2·1 65	1·5 48	3·04 73·7
2·8 74	2·8 75	3·0 77	3·0 77	3·0 79	2·9 80	2·0 60	2·4 83	2·4 85	2·2 83	2·0 84	2·0 84	2·23 72·5
4·3 77	4·2 78	4·7 90	4·5 89	5·0 99	4·8 99	4·2 93	4·0 88	4·3 99	4·3 99	3·7 86	3·1 74	3·50 84·4
4·9 84	4·8 82	4·8 87	4·7 84	**5·4** 92	4·7 90	4·3 91	4·0 87	3·9 86	3·8 98	3·6 84	3·7 84	4·04 86·1
4·8 76	4·9 75	4·9 72	5·1 66	5·0 69	5·1 72	4·9 84	4·3 75	4·6 93	3·9 93	4·3 100	3·2 75	4·21 78·8
4·5 76	4·6 73	4·6 74	4·6 78	4·5 83	4·3 84	4·1 88	3·6 83	4·3 97	4·2 94	4·1 88	3·9 84	3·99 80·6
4·2 74	4·4 75	4·2 72	4·3 76	4·5 83	4·4 81	4·3 78	4·2 78	4·2 82	4·4 95	4·2 86	4·0 79	4·14 81·5
3·7 67	3·8 66	4·0 68	4·2 74	3·9 71	3·8 75	3·6 76	3·1 71	3·5 86	3·3 84	3·0 79	2·6 70	3·65 76·0
3·5 78	3·8 84	3·8 83	2·6 58	3·0 66	2·9 66	3·6 94	2·1 62	2·3 74	1·7 54	2·3 82	2·1 77	2·77 74·5
2·38 58·6	2·48 **58·3**	2·62 60·2	**2·64** 62·4	2·62 65·4	2·51 66·9	2·36 69·2	2·21 70·9	2·23 74·9	2·11 74·8	2·13 80·2	1·97 77·8	2·16 71·3

May 1883. Height of the Thermometers

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.
1	1·9	63	1·4	44	1·9	66	1·9	68	2·3	78	2·2	68	2·3	70	2·5	68	3·2	73	3·4	75	4·8	97	4·4	80
2	3·4	81	3·4	75	4·4	90	4·2	89	3·2	82	2·9	89	2·4	68	2·3	67	2·1	56	2·1	55	2·6	69	2·5	60
3	1·0	48	1·2	66	1·0	64	1·1	70	1·2	73	1·1	70	1·1	64	0·9	53	1·0	48	1·0	48	1·0	45	1·1	50
4	0·8	67	0·8	70	0·8	73	0·8	74	1·1	83	1·1	78	1·0	67	1·0	64	1·1	63	1·1	61	1·1	51	1·0	44
5	1·1	73	1·4	84	1·2	74	1·2	72	1·2	64	1·2	61	1·3	58	1·5	57	1·6	50	1·9	50	2·5	60	3·1	67
6	2·0	73	1·5	56	1·6	69	1·6	75	1·8	75	1·5	56	1·1	42	1·3	44	1·2	37	1·8	52	1·6	37	1·8	43
7	1·4	67	1·3	70	1·4	77	1·3	72	1·4	70	1·2	53	1·3	53	1·4	49	1·4	44	1·6	46	1·8	49	1·6	40
8	1·3	55	1·2	54	1·3	59	1·1	50	1·2	48	1·1	42	1·3	45	1·4	44	1·5	44	1·9	50	2·4	59	2·1	46
9	1·8	68	1·5	61	1·8	77	1·7	74	2·1	83	1·9	68	1·7	54	2·0	57	2·1	58	3·0	82	3·2	76	2·8	63
10	3·3	73	3·3	74	3·3	79	2·7	65	2·9	68	2·9	65	4·2	88	3·8	76	4·5	83	3·6	60	3·7	58	3·9	61
11	2·9	75	2·9	76	2·3	64	2·9	77	3·3	76	3·7	77	3·6	72	3·7	69	4·2	74	4·4	74	4·5	72	4·4	70
12	2·6	81	2·9	80	2·7	71	2·6	74	3·2	75	3·6	72	3·9	71	4·4	75	4·4	73	4·6	70	4·4	67	4·7	66
13	3·8	69	3·7	73	3·3	70	3·1	72	3·4	75	3·5	72	3·9	74	4·3	77	4·4	75	4·6	71	4·7	71	4·7	61
14	3·2	71	3·2	76	3·0	79	2·8	68	3·7	74	3·7	70	4·0	69	4·2	70	4·4	70	4·7	68	4·8	61	5·0	62
15	2·9	62	2·8	64	2·9	64	2·9	68	3·2	72	3·6	76	3·6	70	4·3	76	4·5	78	4·5	69	4·7	78	4·8	74
16	3·7	81	3·7	77	3·7	77	3·8	78	4·1	83	4·1	76	4·7	73	4·7	69	5·0	69	5·3	71	5·5	71	5·4	63
17	5·7	80	5·5	86	5·2	94	4·9	96	4·9	86	5·1	80	5·3	72	5·8	73	6·1	74	6·4	77	6·7	86	6·9	75
18	6·3	99	5·8	97	5·2	99	5·0	89	5·4	84	5·4	86	5·6	86	5·8	91	5·5	89	5·5	87	5·9	93	6·0	78
19	5·0	91	4·9	93	4·8	92	4·8	91	4·8	92	4·9	96	4·8	88	5·4	92	5·1	83	5·7	82	6·0	73	5·8	50
20	5·4	73	5·3	74	5·3	72	5·2	73	5·3	74	5·5	65	6·0	64	6·2	62	6·1	56	6·3	50	6·1	59	6·1	55
21	5·3	88	5·5	87	5·6	86	5·0	95	5·4	79	5·9	70	5·8	72	6·1	66	6·2	60	7·0	55	7·2	50	6·5	50
22	5·7	88	5·5	100	5·0	93	5·0	94	5·0	86	5·4	88	5·3	89	5·7	90	6·2	86	5·8	83	5·6	80	6·7	86
23	4·5	96	4·3	95	3·9	88	3·8	85	4·1	84	4·4	85	4·6	81	4·7	79	4·9	72	5·1	65	5·3	61	5·7	58
24	4·4	83	4·1	86	3·8	82	3·7	87	4·1	81	4·9	77	5·4	79	5·5	74	5·8	71	5·7	67	6·0	61	6·4	59
25	4·7	89	4·8	91	4·8	91	4·8	91	4·8	91	4·8	91	4·8	85	5·2	91	5·2	93	5·4	90	5·6	92	6·0	77
26	4·7	86	4·6	85	4·7	86	4·8	86	5·2	79	5·7	83	5·4	77	5·4	70	4·9	59	5·0	56	5·2	54	5·3	49
27	4·0	85	4·1	79	4·3	88	4·6	85	4·8	82	5·0	80	5·2	76	5·6	63	5·6	52	6·1	57	6·1	57	5·5	55
28	5·9	79	5·9	96	5·2	91	4·9	92	5·0	85	5·4	85	5·5	78	5·4	76	5·2	70	5·5	67	5·7	62	5·7	60
29	4·9	90	4·5	89	4·5	89	4·5	84	4·9	77	5·7	76	5·8	68	6·1	60	6·3	56	6·1	49	6·5	46	6·4	44
30	5·6	89	5·6	85	5·5	76	5·3	71	5·3	75	5·3	78	5·3	69	5·4	83	5·1	83	4·8	92	4·5	87	4·3	81
31	2·5	57	2·6	59	2·6	61	2·5	57	2·8	63	3·1	65	3·6	71	3·5	67	3·6	65	3·8	62	4·1	59	4·0	56
Mean -	3·60	76·8	3·50	77·5	3·45	78·7	3·38	78·1	3·58	77·3	3·73	74·1	3·86	70·7	4·04	69·4	4·14	66·6	4·31	65·8	4·51	65·5	4·51	60·7

June 1883. $\varphi = +\ 62°\ 38'\ 52''$.

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.	m. m.	p. c.
1	3·1	79	3·2	81	2·8	70	3·1	79	3·2	78	3·7	80	4·1	81	4·5	78	4·8	80	5·1	74	4·9	72	5·2	68
2	5·4	74	5·3	78	5·2	75	5·6	72	5·9	79	5·7	76	6·1	64	5·8	57	6·1	53	6·2	53	6·1	56	6·1	46
3	6·4	79	6·4	74	6·7	90	5·9	87	6·4	84	6·9	70	7·1	69	7·7	64	7·0	63	7·5	56	8·0	64	7·6	49
4	4·9	84	4·9	87	5·3	87	5·8	86	5·6	79	5·6	76	5·9	75	7·2	66	7·6	66	7·2	67	7·3	62	7·1	67
5	5·7	96	5·8	97	5·5	93	5·2	89	5·5	84	5·5	83	5·6	78	5·6	75	5·8	76	6·0	69	5·7	70	6·0	67
6	5·2	82	4·9	78	4·5	78	4·5	79	4·5	77	4·5	77	4·3	73	4·6	68	4·7	65	4·8	63	4·9	64	5·1	67
7	5·3	78	5·2	77	5·2	77	5·2	76	5·4	79	5·4	79	5·7	82	5·7	75	5·4	68	5·4	70	5·4	66	5·4	63
8	4·9	92	4·6	84	4·7	85	4·8	83	4·9	82	5·1	84	5·3	84	5·4	85	5·6	87	5·7	89	5·8	79	5·9	80
9	5·9	94	6·0	95	5·9	94	6·1	91	6·6	87	6·9	87	6·6	75	7·1	70	7·7	63	8·0	57	7·7	52	7·4	47
10	6·0	80	5·8	78	5·8	80	6·2	78	7·0	72	7·3	73	7·0	73	6·4	52	6·3	52	6·6	55	6·5	49	6·2	45
11	4·4	63	4·5	66	4·7	78	4·7	77	4·7	72	5·0	71	4·8	64	5·1	64	4·9	56	5·0	54	4·9	48	5·5	50
12	4·6	67	4·5	75	4·5	77	4·3	71	4·4	65	4·5	60	4·6	59	4·7	56	4·8	55	4·7	47	4·9	50	4·6	46
13	4·7	72	4·9	76	4·6	72	4·7	70	4·5	63	4·6	57	4·6	58	4·9	59	5·6	54	5·8	59	5·9	53	5·9	48
14	6·4	81	5·8	78	5·6	78	5·5	80	5·5	76	5·5	76	5·5	72	5·5	72	5·4	69	5·8	68	5·8	60	6·0	61
15	5·9	74	5·6	73	5·8	73	5·6	69	5·6	69	5·7	62	5·7	57	6·0	60	6·2	60	6·5	59	6·5	58	6·6	60
16	7·2	88	5·7	71	4·9	61	4·9	61	4·7	60	4·7	56	5·0	57	5·5	58	6·0	58	6·5	58	7·1	64	7·2	62
17	7·4	90	7·4	93	7·2	93	7·0	89	7·3	84	7·3	82	7·8	81	8·0	78	7·2	88	7·5	94	7·1	90	7·4	80
18	7·2	93	7·1	95	7·1	95	7·1	91	7·1	90	7·0	90	6·1	82	5·7	82	6·3	88	6·4	79	7·4	82	7·0	74
19	5·4	71	5·3	72	5·2	71	5·2	71	5·6	70	5·7	62	5·6	58	5·7	56	5·7	53	5·4	50	5·6	48	5·6	48
20	4·9	72	5·1	74	5·2	73	5·1	73	5·4	72	5·3	68	5·3	63	5·5	62	5·4	64	5·6	63	6·0	67	5·9	66
21	6·1	75	5·7	71	5·6	69	5·3	65	5·4	68	5·7	73	5·9	74	6·0	73	6·3	72	6·6	72	7·1	73	7·3	74
22	6·4	60	6·2	60	6·2	62	6·4	66	6·5	68	6·5	67	7·2	73	7·1	69	7·6	70	8·0	68	7·9	61	7·2	50
23	9·2	92	8·5	93	8·3	95	8·2	91	8·6	89	8·5	91	8·4	81	9·0	79	9·0	75	9·1	76	9·0	75	9·6	74
24	8·7	88	8·9	85	8·9	86	9·1	86	8·9	84	9·4	82	9·9	81	9·9	76	9·4	73	10·0	71	10·0	74	10·3	75
25	10·6	83	10·7	86	10·4	87	9·8	90	9·2	86	9·5	85	10·1	83	10·0	81	10·2	76	10·6	77	10·3	72	10·7	68
26	10·5	91	10·1	91	10·3	88	10·3	84	11·0	82	11·2	69	11·8	70	12·0	62	12·1	62	11·9	60	12·3	57	12·0	59
27	8·9	81	8·8	82	8·6	83	8·1	81	7·2	76	7·1	78	6·7	76	6·6	77	6·6	77	6·6	79	6·2	70	6·5	67
28	5·5	74	5·5	80	5·3	81	5·5	76	5·6	70	5·6	63	5·9	63	5·9	58	5·9	55	5·8	54	5·9	52	5·9	50
29	5·7	65	5·9	65	6·3	69	6·7	69	6·7	66	6·5	66	6·6	65	6·8	66	6·7	68	6·8	70	7·4	75	7·6	79
30	3·2	99	7·8	95	7·9	94	8·0	87	8·9	86	9·1	84	9·1	85	8·9	79	9·1	75	9·3	71	9·2	68	9·2	64
Mean -	6·35	80·6	6·19	80·3	6·12	80·5	6·12	78·9	6·24	76·6	6·38	74·2	6·48	71·9	6·63	68·6	6·70	67·4	6·88	66·1	6·95	64·4	6·98	61·8

above the ground 1·78 m.

May 1883.

1	2	3	4	5	6	7	8	9	10	11	12	Means.
m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.
4·4 73	4·5 77	4·6 82	4·6 86	4·4 81	4·3 82	4·1 85	4·1 87	3·9 86	4·4 100	3·4 81	2·8 68	3·40 76·6
2·7 65	2·8 66	2·7 66	2·4 61	2·4 65	2·1 71	1·6 59	1·7 69	1·2 52	1·3 54	1·4 63	1·2 55	2·46 67·4
0·8 38	1·1 48	0·9 40	0·9 40	0·9 40	**0·8** 38	**0·8** 41	0·9 53	0·9 54	**0·8** 57	1·0 79	**0·8** 67	**0·96** 53·9
1·0 43	1·1 45	1·2 50	1·3 50	1·2 47	1·2 52	1·3 60	1·3 71	1·4 77	1·3 78	1·2 76	1·0 59	1·09 62·6
3·7 75	2·9 58	3·1 61	2·9 59	3·1 63	2·8 61	1·9 45	1·6 42	1·5 43	1·6 46	1·5 46	1·3 46	1·97 59·0
2·3 52	2·7 59	2·1 47	2·5 58	2·7 65	2·5 66	1·4 42	1·7 59	1·6 69	1·4 61	1·6 77	1·5 68	1·77 57·6
2·2 50	2·4 57	1·9 46	2·1 50	1·8 46	2·0 48	1·8 48	1·5 45	1·5 43	1·2 **36**	1·3 46	1·1 42	1·57 **52·0**
2·0 45	2·6 51	2·8 58	3·0 59	3·2 68	2·7 60	2·4 58	2·1 61	1·6 51	2·1 67	2·1 73	1·9 70	1·92 54·9
3·3 70	3·0 62	3·3 69	3·1 64	3·4 69	3·6 71	3·7 73	3·8 76	3·7 78	3·8 81	3·6 77	3·4 71	2·79 70·1
4·2 64	4·5 68	4·4 67	4·7 71	4·7 71	4·6 72	4·5 80	4·3 78	4·1 88	4·1 87	3·7 81	3·2 78	3·89 73·1
4·6 70	4·5 67	4·5 68	4·6 71	4·7 71	4·4 74	4·3 76	4·2 78	4·2 89	3·2 71	1·9 52	2·4 71	3·75 72·3
4·9 67	4·9 68	4·9 68	4·8 66	4·7 70	4·5 67	4·5 69	4·2 69	4·1 72	3·8 74	4·0 77	3·8 78	4·04 71·7
4·7 64	4·6 64	4·5 54	4·5 54	4·7 59	4·3 57	4·6 62	4·5 68	4·2 73	3·7 62	4·0 70	3·6 82	4·14 67·9
4·9 61	4·9 65	4·9 65	4·7 63	4·7 59	4·7 60	4·6 68	4·2 70	3·9 66	3·6 69	3·4 70	3·3 70	4·21 67·7
4·9 64	5·1 64	5·0 66	4·9 66	4·9 65	4·9 70	4·7 73	4·4 70	4·3 75	4·1 83	4·0 80	4·0 84	4·06 71·3
5·9 61	5·5 64	5·6 64	5·7 66	5·4 63	5·4 64	5·6 62	5·2 67	5·8 83	5·6 73	5·7 75	5·6 74	5·02 71·0
6·9 67	7·2 70	6·8 88	6·5 83	6·8 75	**7·4** 74	**7·4** 80	7·0 92	6·6 92	6·2 87	6·0 97	6·1 93	**6·22** 82·4
5·6 79	5·8 85	5·7 90	5·7 80	5·9 79	6·0 91	5·9 87	5·9 87	5·7 84	5·6 82	5·2 84	5·0 89	5·63 87·3
5·6 46	5·6 48	5·8 56	5·6 68	5·5 68	5·7 76	5·5 70	5·4 68	5·3 83	5·4 68	5·3 72	5·4 68	5·33 75·6
5·8 53	6·1 53	6·1 49	6·3 40	6·3 55	6·3 53	6·8 63	6·9 70	6·2 70	6·2 78	5·9 79	5·9 83	5·99 63·5
5·2 38	6·6 44	**7·4** 70	6·6 69	6·7 74	6·1 64	6·4 75	6·2 79	6·2 86	5·6 92	5·5 93	5·7 89	6·07 72·1
5·9 80	5·2 85	5·1 84	5·0 87	5·1 93	5·1 96	5·1 95	4·9 93	4·8 92	4·9 95	4·6 92	4·6 95	5·28 **89·6**
5·7 55	5·4 51	5·6 52	5·6 52	5·4 56	5·4 59	5·9 64	6·1 68	5·8 79	5·3 93	4·5 78	4·6 82	5·00 72·4
6·2 60	6·2 57	6·4 52	6·2 54	6·1 54	6·5 56	6·8 60	6·2 69	5·7 76	5·2 64	5·1 84	4·7 86	5·46 70·0
5·8 73	6·3 75	6·0 70	5·6 74	6·2 76	6·0 76	6·1 75	6·5 78	6·4 94	5·8 92	5·4 92	5·1 88	5·51 84·8
5·4 48	5·5 47	5·3 48	5·4 48	5·3 51	5·6 51	5·9 57	5·6 62	5·3 66	4·7 88	4·0 80	4·0 79	5·11 66·5
5·8 63	6·3 52	6·3 62	6·2 55	5·8 60	5·7 73	6·0 64	5·9 69	6·0 76	6·3 81	6·1 79	5·9 74	5·53 69·5
5·6 58	5·8 55	6·2 57	6·3 55	6·6 56	6·7 65	6·8 68	6·8 77	5·8 78	4·9 77	4·9 78	4·8 86	5·68 73·0
6·6 42	6·2 39	6·1 45	6·4 45	7·2 48	6·4 55	6·1 60	6·2 60	5·8 57	6·1 74	6·0 73	6·0 84	5·89 62·9
3·5 66	3·2 61	3·5 66	3·4 64	3·1 59	3·2 64	2·9 58	3·0 61	3·1 65	3·0 63	2·8 61	2·8 62	4·14 71·6
4·2 65	4·3 69	4·1 60	4·4 71	4·5 75	4·4 78	4·5 84	4·3 91	3·8 87	3·4 74	3·8 85	3·4 79	3·65 69·2
4·51 **59·8**	4·60 60·5	4·60 61·9	4·57 62·2	**4·62** 63·9	4·54 65·9	4·51 66·5	4·39 70·5	4·21 73·7	4·01 74·4	3·84 75·8	3·70 74·8	4·11 69·6

$\lambda = -115° 43' 50'' = -$ 7h. 42m. 55s.

June 1883.

1	2	3	4	5	6	7	8	9	10	11	12	Means.
m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.	m. m. p. c.
6·0 67	5·8 53	6·0 47	5·7 47	5·8 48	5·8 49	5·6 52	5·9 57	6·1 63	6·3 64	5·8 73	5·5 72	4·92 67·2
6·1 59	6·6 53	7·2 50	8·0 52	7·4 57	7·1 49	7·8 50	7·7 48	7·7 58	7·3 66	6·4 71	6·8 74	6·48 61·3
7·6 56	7·4 52	7·3 53	7·3 51	7·6 46	7·7 56	7·3 61	6·1 74	5·4 79	5·3 89	5·5 83	5·4 88	6·80 68·2
7·4 62	8·4 50	8·5 62	8·9 67	8·3 63	8·5 59	8·8 72	7·7 65	7·3 73	7·2 81	6·4 86	5·7 87	6·98 72·0
5·7 64	5·6 63	5·4 64	5·8 63	6·1 59	6·1 60	5·4 71	5·5 71	5·5 72	5·4 73	5·5 76	5·4 79	5·63 74·7
5·3 69	5·3 70	5·3 69	5·8 71	5·9 74	5·8 72	5·6 71	5·6 73	5·3 71	5·4 73	5·5 77	5·3 74	5·11 72·3
5·4 66	5·4 66	5·4 66	5·5 67	5·1 68	5·0 72	4·8 73	4·8 73	4·9 77	4·9 75	5·0 82	4·8 87	5·23 73·4
5·7 77	5·4 72	5·4 74	5·8 78	5·8 79	5·7 81	6·0 85	6·3 85	6·7 87	6·1 97	6·0 94	5·8 99	5·56 **84·3**
7·7 45	7·3 44	7·4 50	7·2 44	7·1 51	7·3 51	7·8 55	6·6 63	6·1 69	6·1 69	6·6 74	6·4 81	6·88 67·0
5·9 43	5·6 **41**	5·6 42	5·4 42	5·3 43	5·5 45	5·3 45	5·5 51	6·1 68	4·9 54	4·9 61	4·5 60	5·89 57·6
5·5 47	5·4 44	5·8 45	5·5 43	6·2 46	6·4 49	7·1 59	7·2 64	7·4 74	5·8 66	5·8 73	4·6 62	5·46 59·8
4·5 43	4·5 42	4·7 43	5·6 48	4·9 43	5·6 48	5·4 54	5·5 60	5·4 64	5·6 70	5·2 68	5·0 68	**4·87** 57·5
6·2 62	6·1 63	6·4 60	6·5 59	6·7 70	6·6 73	7·0 79	7·1 80	6·9 78	7·1 86	7·2 92	6·5 82	5·87 67·7
6·2 66	6·1 63	5·6 53	6·1 59	6·2 60	6·7 67	6·2 64	6·7 72	7·2 81	6·7 81	6·4 78	5·6 69	5·99 70·2
6·7 56	7·0 55	7·2 57	7·5 58	7·4 56	7·5 61	7·8 65	8·4 72	7·9 79	7·5 77	8·3 86	7·3 83	6·75 65·8
6·9 60	6·9 59	6·7 58	7·0 59	6·5 60	6·3 60	7·3 62	8·1 70	7·8 76	6·4 70	6·5 72	7·0 78	6·35 64·1
7·3 74	7·4 69	7·8 76	7·8 72	7·3 61	7·1 66	7·1 61	8·4 75	8·0 81	7·6 86	7·7 91	7·0 89	7·46 81·0
6·9 67	7·0 62	6·3 54	6·4 52	6·0 50	6·2 54	6·3 55	6·2 57	6·7 69	6·2 70	6·2 76	5·8 73	6·58 74·2
5·8 48	5·6 45	5·7 46	5·6 46	5·6 47	5·4 49	5·1 47	5·3 54	5·4 60	5·3 66	5·1 66	4·7 64	5·43 **57·0**
6·0 67	6·2 71	5·7 68	5·7 70	5·9 79	5·9 78	6·0 78	6·1 79	5·8 75	5·9 75	6·1 78	6·0 76	5·66 71·3
7·6 80	7·9 79	7·2 55	7·2 52	7·4 59	7·1 64	7·1 65	7·1 67	7·3 68	7·4 69	6·6 57	6·2 56	6·63 67·9
7·2 49	7·4 51	8·6 62	8·3 65	8·7 75	8·8 72	8·9 76	9·2 80	8·8 77	9·7 88	9·6 88	9·3 93	7·82 68·8
9·4 81	9·5 72	8·9 57	9·9 65	10·1 71	9·3 68	9·6 78	9·4 80	9·3 79	9·5 89	9·4 89	9·0 87	9·12 80·3
10·0 74	10·3 73	10·1 78	9·7 75	10·4 79	10·2 82	9·7 80	9·8 79	9·8 84	10·1 80	10·7 84	10·7 84	9·78 79·7
9·9 63	10·6 69	10·5 71	10·3 59	10·1 64	9·8 62	10·7 68	10·9 77	10·1 82	11·0 89	10·4 87	10·6 88	10·31 77·2
10·6 49	**13·1** 63	10·4 48	10·4 53	12·9 74	12·5 77	12·2 82	12·4 88	11·2 82	9·7 82	9·5 86	9·1 82	**11·22** 72·5
6·7 68	6·6 61	6·7 61	6·8 59	6·7 56	6·7 55	6·6 55	6·3 57	6·2 64	6·6 74	5·8 71	5·6 72	6·88 70·0
6·0 49	6·0 47	6·2 50	6·3 50	6·3 51	6·0 50	6·5 57	6·1 59	5·8 60	6·0 66	5·9 66	5·5 65	5·89 60·3
7·0 73	7·6 77	8·5 88	8·6 93	8·3 87	8·4 87	8·6 87	8·7 92	8·5 93	8·0 91	8·0 94	7·8 95	7·41 78·3
9·6 63	9·9 61	10·2 64	10·3 64	10·4 64	10·5 65	10·7 72	10·1 68	8·9 62	9·8 72	10·4 82	8·3 68	9·32 74·7
6·95 61·6	7·14 59·7	7·08 **59·0**	7·24 59·4	7·29 61·3	7·24 62·7	7·34 66·0	**7·36** 69·7	7·19 73·5	7·03 76·3	6·93 78·7	6·58 77·8	6·80 69·9

July 1883. Height of the Thermometers

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
1	8·4	71	8·0	75	7·7	72	7·7	68	8·1	66	7·7	58	8·1	59	7·8	50	7·6	47	7·7	46	8·1	47	7·8	46
2	6·9	59	6·9	59	6·6	58	6·4	53	6·6	50	7·4	52	7·7	45	9·4	50	9·6	49	9·3	49	9·9	50	10·4	53
3	10·4	79	11·0	85	10·5	82	10·5	82	10·1	79	10·0	74	10·1	69	10·6	67	10·2	58	11·1	62	11·6	64	10·4	57
4	6·0	65	6·8	75	6·7	78	6·7	78	6·4	72	6·0	65	6·6	73	6·2	65	6·2	63	6·0	56	6·0	55	6·7	56
5	6·4	68	6·4	69	6·4	70	6·2	64	6·1	64	6·4	66	6·3	64	6·4	62	6·9	64	6·9	59	6·7	57	6·8	56
6	6·3	62	6·6	69	7·1	72	7·3	74	7·0	66	8·0	67	8·6	66	9·4	67	9·7	60	10·1	58	10·6	54	10·4	56
7	11·8	93	11·2	94	11·4	97	11·2	91	11·8	90	12·5	86	12·1	81	12·6	75	12·6	73	12·6	69	12·8	68	12·1	63
8	9·0	75	9·9	86	9·1	82	9·0	73	9·2	72	9·2	67	9·6	68	10·0	66	10·2	64	9·2	50	9·1	50	9·3	48
9	10·1	74	11·1	88	10·3	77	10·4	74	11·1	77	11·1	78	11·4	77	11·3	70	11·2	60	11·7	62	11·6	57	12·2	64
10	7·6	59	8·4	70	8·7	73	8·4	71	8·4	71	8·6	70	8·7	67	9·6	71	8·7	64	8·3	60	8·0	57	8·2	58
11	7·1	75	7·3	83	7·6	86	7·5	88	7·9	93	8·0	91	8·3	93	8·9	100	8·2	90	8·1	89	8·4	91	8·5	89
12	7·3	77	6·5	73	6·4	74	6·4	75	6·7	70	7·2	68	7·5	62	8·1	62	7·5	52	7·4	47	8·0	48	7·8	45
13	7·5	73	7·3	74	6·4	66	6·8	67	7·1	65	7·8	64	7·7	56	8·0	52	7·1	46	7·9	57	8·0	56	7·4	48
14	7·4	72	7·0	68	7·3	72	7·8	75	7·8	71	8·1	66	8·0	67	8·1	61	8·0	58	7·6	52	7·4	48	7·4	48
15	7·2	70	7·8	81	8·2	87	8·2	82	8·8	72	9·3	70	9·8	75	8·2	59	8·0	57	8·2	51	8·1	50	8·0	48
16	8·9	87	8·6	86	8·3	86	7·9	78	9·0	75	9·2	71	9·3	68	9·7	67	8·9	56	8·5	50	9·3	55	8·6	50
17	8·4	77	8·9	81	9·5	86	8·8	75	9·6	79	9·9	77	9·4	69	9·4	63	11·4	77	11·0	72	9·5	58	9·2	57
18	9·1	88	8·6	72	8·5	70	8·8	82	9·0	72	9·2	68	9·6	67	10·0	68	9·8	66	9·9	62	10·7	68	11·0	68
19	8·8	60	8·7	71	8·3	72	8·7	73	8·8	66	9·0	68	9·3	65	9·5	60	9·7	64	10·0	63	11·0	69	11·4	64
20	10·6	84	9·8	80	8·6	71	9·6	78	9·1	67	9·4	66	9·0	59	9·1	59	9·6	56	10·8	64	11·0	64	9·3	48
21	9·4	69	9·5	72	9·0	68	8·9	67	9·2	68	9·2	67	9·4	60	10·4	59	10·2	55	10·1	53	9·3	47	9·5	48
22	10·2	77	9·9	74	9·0	69	8·6	71	9·0	72	8·7	66	8·2	59	8·6	64	8·2	56	7·1	46	7·3	47	7·5	47
23	7·6	61	7·9	64	8·4	71	8·4	70	7·5	64	7·5	65	7·7	59	7·3	51	7·8	51	7·8	49	8·0	44	8·4	45
24	9·0	86	8·8	90	8·9	87	9·1	88	9·0	87	9·2	86	8·9	81	8·8	75	9·3	77	8·8	69	8·8	70	8·5	66
25	9·3	88	9·0	88	9·1	89	9·4	89	9·4	88	9·2	92	8·4	90	8·0	87	7·8	80	7·4	75	7·1	71	7·1	66
26	7·6	80	7·1	75	7·4	81	7·4	81	7·9	79	7·9	73	8·3	75	8·7	76	8·3	69	8·5	68	8·2	59	8·1	57
27	8·0	86	7·8	82	7·9	84	8·1	81	8·5	92	8·9	92	8·5	86	8·1	77	8·5	76	8·3	64	8·2	62	8·6	64
28	8·7	94	8·5	95	8·3	94	8·1	95	8·3	93	8·7	89	8·9	86	8·9	81	8·7	73	9·0	70	8·7	64	9·1	60
29	8·7	88	8·6	93	9·0	97	9·1	96	9·0	84	9·3	79	9·5	74	8·9	60	9·6	62	9·5	60	9·6	56	11·0	60
30	9·1	71	10·2	81	9·7	76	9·9	78	9·2	71	9·8	72	10·2	71	10·1	68	9·8	63	9·2	57	9·0	53	9·4	52
31	10·4	73	10·2	75	9·9	72	9·8	73	9·7	73	9·7	74	9·9	75	9·9	71	9·8	74	9·8	76	9·8	72	9·8	71
Mean -	8·48	75·5	8·51	78·3	8·38	78·0	8·41	77·1	8·56	74·5	8·76	72·5	8·86	69·9	9·04	66·5	8·99	63·2	8·97	60·2	9·02	58·4	9·02	56·7

August 1883. $\varphi = +62° 38' 52''$.

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
1	10·5	81	10·5	82	10·8	87	10·7	85	10·2	81	10·1	78	10·4	77	11·3	80	11·4	77	11·0	71	11·2	71	11·1	65
2	11·4	76	11·8	82	11·8	83	11·9	87	11·7	87	11·9	93	11·2	88	11·2	85	11·1	85	11·0	75	11·6	77	12·4	79
3	13·4	95	12·3	82	12·7	86	12·8	91	13·4	94	13·3	94	12·6	87	13·1	88	13·9	81	14·2	81	13·7	59	14·2	61
4	10·0	87	10·0	87	10·3	89	9·9	88	9·8	85	9·7	82	9·4	77	9·3	75	9·0	71	9·4	70	9·2	64	9·6	61
5	9·5	83	9·2	79	9·2	92	8·7	91	8·9	85	8·8	77	9·1	75	9·0	68	9·7	65	9·9	62	9·9	59	10·5	57
6	9·4	69	9·8	73	10·0	76	10·2	80	10·3	81	11·0	89	11·2	86	10·6	73	11·2	73	11·6	82	11·7	79	11·7	75
7	10·2	82	10·0	81	10·0	80	10·1	83	9·4	81	9·2	75	8·8	76	8·4	76	7·7	74	7·6	73	8·2	71	8·0	65
8	7·2	76	8·0	80	8·0	80	8·1	79	7·7	75	8·3	83	8·2	80	8·3	80	8·6	78	8·9	74	9·1	74	9·2	70
9	7·9	79	7·8	77	8·0	80	8·0	82	8·1	82	8·3	79	8·6	74	8·2	69	7·4	56	8·2	55	8·6	59	7·9	56
10	7·5	71	7·5	71	7·9	74	8·1	75	8·4	79	8·8	77	8·9	70	10·0	74	10·0	70	9·7	68	10·6	73	10·0	68
11	9·8	78	10·5	82	10·5	85	10·7	87	10·7	86	10·5	82	10·5	79	10·5	77	10·4	74	10·0	67	9·4	59	9·5	60
12	11·1	84	11·0	84	11·	88	11·3	88	11·4	90	11·5	91	11·6	82	12·2	85	11·9	87	12·1	85	12·1	82	12·4	79
13	11·1	79	11·1	85	11·3	83	11·5	86	11·3	86	11·1	84	11·4	89	11·9	92	12·1	89	12·3	92	12·5	92	12·9	90
14	10·8	85	10·5	85	10·4	87	10·3	88	10·2	87	10·4	87	10·6	86	10·7	82	10·4	82	10·0	78	10·0	80	10·0	82
15	9·3	87	9·2	86	9·1	89	9·1	89	8·9	86	8·6	81	8·6	77	8·8	73	8·8	68	8·9	69	9·1	66	8·8	63
16	7·2	92	7·2	92	7·2	91	6·9	86	7·2	87	7·4	87	7·5	81	7·5	76	7·9	77	8·1	75	8·0	72	8·0	74
17	8·8	92	8·9	92	8·9	93	8·2	86	8·5	88	9·2	94	9·3	94	9·4	89	9·4	83	9·8	82	9·8	75	9·9	72
18	8·5	92	8·2	91	8·7	98	7·6	86	8·6	93	9·3	92	9·5	85	9·5	77	9·7	72	10·3	69	11·4	77	11·4	78
19	9·0	83	8·6	80	8·8	85	8·4	83	8·5	84	8·9	85	9·1	89	10·0	93	10·3	92	10·0	93	9·5	89	9·1	82
20	5·8	74	5·8	74	5·6	72	5·6	73	5·7	77	5·6	74	5·7	72	5·7	70	6·3	75	5·8	64	5·6	63	5·6	59
21	5·1	78	5·2	85	5·3	89	5·2	88	5·1	87	5·5	82	5·3	72	5·5	66	5·6	62	5·8	63	5·9	60	5·6	52
22	5·9	75	6·0	78	6·4	81	6·2	79	6·3	80	6·5	78	6·5	80	7·1	79	6·9	68	7·5	66	7·8	64	6·8	53
23	7·6	94	7·3	89	7·4	94	7·3	98	7·4	93	8·1	94	7·7	86	7·7	76	8·3	75	8·5	69	8·4	64	8·2	61
24	6·5	82	6·4	86	6·6	93	6·4	93	6·5	90	6·6	86	6·9	87	7·3	82	7·5	72	8·0	74	7·1	61	7·3	68
25	8·3	84	8·5	86	7·9	84	7·8	88	7·4	88	7·6	83	7·8	81	8·0	78	9·2	80	8·7	68	8·8	64	9·4	76
26	6·6	80	6·2	78	6·3	85	6·2	89	6·3	85	6·7	82	7·0	78	6·8	71	6·5	67	7·2	67	7·5	66	7·4	60
27	7·7	87	7·4	88	7·0	87	6·9	87	7·0	89	6·7	82	6·5	72	7·1	71	8·0	69	8·0	64	8·4	61	9·1	69
28	7·6	87	7·7	87	7·6	91	7·9	88	7·9	98	7·5	82	7·9	76	8·0	74	8·0	67	8·5	62	8·4	59	7·3	50
29	5·3	67	5·2	73	5·2	79	5·3	83	5·2	80	5·8	78	5·9	72	6·1	66	6·2	65	6·9	71	6·1	55	6·1	52
30	5·7	76	5·7	76	5·6	74	5·7	77	5·8	85	5·6	79	5·8	78	5·9	76	6·3	74	6·7	72	6·6	72	6·7	71
31	6·6	89	6·3	84	5·9	88	5·8	90	5·8	91	6·0	91	5·8	79	6·2	76	6·2	69	7 2	70	6·6	61	6·6	64
Mean -	8·43	82·1	8·38	82·4	8·43	85·3	8·32	85·6	8·35	85·8	8·53	83·9	8·56	80·2	8·73	77·3	8·89	74·1	9·09	72·0	9·12	68·6	9·12	66·8

above the ground 1·78 m.

July 1883.

1		2		3		4		5		6		7		8		9		10		11		12		Means.	
m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
8·1	46	9·0	49	8·8	46	8·7	45	8·7	47	9·6	49	11·0	58	9·8	60	10·0	68	8·9	67	7·5	59	7·3	62	8·43	56·7
10·6	54	11·1	61	11·4	59	11·1	54	10·9	53	12·3	66	9·3	53	10·2	70	11·1	78	11·4	83	10·8	81	10·3	78	9·47	59·0
11·0	64	10·9	83	10·9	74	10·0	67	9·6	63	9·1	61	9·0	61	8·9	63	8·8	65	8·5	67	6·6	56	5·9	60	9·83	68·4
6·9	56	6·8	53	7·1	55	7·3	54	7·0	53	7·2	55	6·9	53	6·7	57	6·6	63	6·4	70	6·4	71	6·1	64	**6·55**	62·7
6·9	57	6·8	55	7·3	57	7·9	61	7·7	58	7·7	61	7·0	59	7·3	61	7·4	63	7·6	66	7·0	64	6·7	65	6·88	62·1
11·0	58	11·0	60	11·0	54	10·2	49	9·6	47	11·1	61	11·2	82	11·9	91	12·0	91	11·9	92	11·6	86	11·9	91	9·80	68·0
11·2	55	11·4	55	9·7	46	10·9	52	10·3	48	9·7	50	11·3	55	10·7	61	11·6	74	11·5	79	10·7	82	8·8	67	**11·35**	71·0
9·4	48	9·7	51	9·3	46	10·9	53	10·0	56	11·1	61	11·6	69	11·6	74	12·1	81	11·3	80	12·2	90	11·5	86	10·13	66·5
11·2	50	11·5	52	11·1	50	11·4	53	11·1	53	11·8	57	13·0	69	**13·4**	74	12·8	79	11·8	76	11·5	78	8·2	62	11·32	67·1
8·3	56	8·3	58	8·5	61	8·6	62	8·5	62	8·5	64	8·3	62	8·4	62	8·1	64	7·7	62	7·4	64	7·4	75	8·30	64·3
8·4	88	8·8	91	8·9	86	9·1	85	8·7	82	8·2	78	8·4	78	8·5	80	8·7	83	8·3	81	9·0	87	8·6	86	8·30	**86·4**
7·5	43	7·4	42	7·7	42	7·7	42	7·8	44	8·8	51	8·7	50	7·6	45	7·7	54	7·7	60	7·1	59	7·4	67	7·49	56·3
7·7	50	8·2	50	8·5	49	8·2	46	8·3	46	9·4	57	8·7	55	9·7	69	7·8	61	9·5	79	7·9	68	7·2	66	7·92	59·2
7·3	43	8·1	47	7·5	45	8·0	49	8·1	50	8·8	50	8·9	53	7·7	53	6·9	53	8·8	75	8·2	70	7·5	67	7·82	58·9
8·1	47	8·0	46	7·9	45	8·0	45	8·4	49	8·3	50	8·3	52	8·6	58	10·0	74	9·2	73	9·3	81	8·3	75	8·41	62·4
9·0	52	8·9	50	9·0	50	8·8	50	8·9	52	8·7	53	8·8	56	8·4	56	8·2	57	7·4	57	7·3	63	8·2	71	8·66	62·3
8·1	49	8·1	47	8·1	48	8·6	52	8·0	49	8·5	55	8·5	58	8·6	60	8·6	64	8·3	63	8·6	67	8·1	69	8·97	64·7
11·3	64	10·8	61	10·9	59	10·5	59	10·9	60	10·5	61	10·7	66	10·1	64	11·6	79	10·0	69	10·4	74	11·2	87	10·10	68·9
10·4	48	11·0	53	11·4	56	11·4	58	11·7	62	11·9	70	11·3	69	10·9	70	11·1	72	9·1	59	9·3	63	9·9	72	10·10	64·5
10·3	51	8·6	43	10·2	55	9·0	48	10·1	53	10·0	57	10·4	60	10·5	66	10·0	65	9·7	66	9·7	69	9·7	69	9·75	62·4
9·0	46	8·5	43	8·6	47	8·9	49	8·9	50	9·3	52	10·1	59	10·2	62	11·0	71	10·7	72	10·0	73	10·5	76	9·57	59·7
7·3	44	6·9	41	7·1	**37**	7·2	39	7·1	40	7·2	43	7·5	45	7·7	47	7·5	52	7·0	50	8·0	64	7·5	58	7·92	**54·5**
8·8	46	8·1	41	9·4	53	8·9	62	9·1	60	8·3	58	9·5	71	8·7	66	8·9	71	9·1	75	8·6	72	8·9	78	8·35	60·3
8·1	63	9·1	60	8·8	65	8·5	57	8·4	59	8·7	76	8·7	73	8·4	73	9·0	84	8·7	87	8·8	84	9·2	86	8·81	76·2
7·3	63	6·7	62	7·1	65	7·2	65	7·4	64	7·4	62	7·3	61	7·0	60	7·2	66	7·3	68	7·0	66	6·7	62	7·80	73·6
8·5	61	8·6	59	8·1	57	8·0	58	8·0	53	7·9	57	8·2	67	7·9	72	8·4	81	8·3	81	8·1	84	7·9	83	8·05	70·3
8·5	69	8·9	81	8·4	87	8·4	83	8·7	85	8·9	87	8·6	85	8·6	87	8·4	88	8·5	91	8·7	90	8·8	93	8·46	82·2
8·8	58	8·8	56	8·3	52	8·6	54	8·3	52	8·5	53	6·1	41	9·3	69	9·0	74	10·3	92	10·1	95	9·3	90	8·71	74·2
10·5	56	11·2	58	10·8	55	11·6	62	11·6	63	11·8	69	10·8	68	10·7	73	10·6	78	11·2	86	9·6	75	9·7	75	10·08	72·0
10·2	55	10·6	56	10·2	55	10·8	59	10·9	60	10·5	61	11·3	69	10·7	69	11·0	77	11·9	87	10·1	69	10·3	72	10·16	66·8
10·2	64	10·2	62	10·3	60	10·9	64	10·4	63	10·4	66	10·3	68	10·3	70	10·2	72	10·1	69	10·2	75	10·3	78	10·10	70·4
9·02	**55·0**	9·09	55·7	9·09	55·4	9·19	56·0	9·12	56·0	9·34	59·7	9·34	62·1	9·32	65·9	**9·42**	71·0	9·29	73·6	8·97	73·5	8·68	73·9	8·97	66·2

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s.

August 1883.

1		2		3		4		5		6		7		8		9		10		11		12		Means.	
m. m.	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*	*m. m.*	*p. c.*
11·4	65	11·4	63	11·8	64	11·9	65	12·1	68	12·9	79	12·4	79	12·3	79	12·2	82	12·1	81	11·5	76	12·0	79	11·37	75·6
12·7	78	13·0	74	13·6	72	13·8	79	13·3	87	13·3	87	13·6	87	13·2	79	11·8	93	13·6	89	13·6	90	13·8	93	12·44	83·5
14·0	65	15·1	77	**15·3**	70	13·1	57	13·0	59	12·8	62	12·3	63	11·4	65	10·3	67	13·6	89	10·0	73	10·6	80	**12·98**	76·1
9·6	56	9·7	52	9·4	53	9·7	52	9·3	51	9·9	55	10·9	64	11·0	68	12·6	94	10·8	82	11·2	90	9·7	82	9·98	72·3
10·4	57	10·1	53	10·3	52	10·6	57	10·4	57	11·2	69	11·2	72	10·4	68	10·0	73	10·3	74	8·9	61	9·9	73	9·83	69·1
11·7	76	12·4	80	12·3	83	13·0	94	13·2	82	12·5	81	12·6	82	12·5	88	11·5	90	11·3	95	11·2	93	11·7	94	11·43	82·3
7·4	58	6·9	49	6·8	46	7·1	48	7·1	48	7·2	50	7·0	54	7·6	66	8·0	80	7·4	83	7·1	80	7·0	77	8·07	69·0
8·8	67	8·3	58	7·7	52	8·2	51	8·2	56	8·6	65	8·5	72	8·2	74	7·9	71	8·1	76	8·5	83	8·4	83	8·27	72·4
8·9	63	8·8	60	8·2	55	7·6	53	7·4	52	7·1	53	7·2	56	6·9	54	7·1	58	7·4	64	7·2	66	7·4	70	7·85	**64·7**
9·6	60	9·4	68	9·2	67	10·1	68	10·0	71	9·7	66	10·0	73	9·7	73	10·0	79	9·9	78	9·7	75	9·7	76	9·34	71·8
9·6	60	10·1	62	10·4	63	10·5	64	10·6	66	10·3	66	11·8	83	11·6	86	11·2	85	11·2	86	11·1	84	11·2	85	10·51	75·3
12·5	76	12·1	72	11·8	65	11·6	63	11·5	65	11·9	70	11·4	73	11·4	76	11·3	80	11·3	78	11·4	80	11·2	79	11·63	79·3
13·2	90	12·4	75	11·7	69	11·0	63	10·6	54	11·1	65	11·7	68	10·6	66	10·8	71	11·2	82	11·0	84	11·0	83	11·53	79·9
10·4	91	10·5	91	10·3	89	10·4	88	10·1	84	10·1	89	9·9	83	9·8	83	9·7	84	9·4	83	9·7	87	9·4	88	10·16	**85·4**
8·7	59	8·7	59	8·7	59	9·0	60	8·9	62	8·3	63	8·5	72	8·4	81	8·1	88	8·0	93	7·2	85	7·3	92	8·61	75·3
8·0	74	8·2	72	9·0	79	8·5	78	8·0	73	8·2	78	8·3	87	8·5	89	8·5	89	8·6	91	8·5	89	8·6	91	7·95	82·5
10·0	72	9·3	65	9·4	68	9·7	71	9·4	68	9·3	70	9·2	73	9·0	75	8·7	79	8·5	83	8·6	87	8·5	92	9·17	81·0
11·5	78	11·6	77	11·4	77	11·5	78	11·8	86	11·7	88	11·3	83	10·8	79	9·6	72	9·5	73	9·4	76	9·0	78	10·08	81·5
8·5	77	8·7	84	8·3	80	7·6	75	7·2	72	6·8	71	6·5	72	6·1	68	6·0	68	5·6	67	5·8	74	5·8	73	8·05	80·0
5·6	58	5·7	60	5·5	60	5·6	59	5·4	59	**5·1**	60	5·3	67	5·3	72	5·2	71	5·4	77	5·4	79	**5·1**	78	**5·56**	68·6
6·1	56	6·6	60	6·5	60	6·0	55	6·0	56	6·2	61	6·2	63	6·4	69	6·6	74	5·9	75	5·8	76	5·9	77	5·78	69·4
7·4	56	7·7	56	7·8	55	9·0	63	9·0	64	8·6	67	9·2	81	9·0	86	9·1	95	8·2	86	8·0	93	7·9	93	7·51	74·0
7·6	56	7·3	51	7·4	52	8·3	61	7·9	59	7·1	58	7·2	66	7·4	75	6·7	72	6·5	71	6·7	77	6·9	87	7·54	74·1
7·8	64	8·2	68	8·6	86	9·3	84	8·8	82	8·6	82	9·1	88	7·7	73	7·7	75	8·1	81	8·2	83	8·1	82	7·62	80·1
9·5	70	9·9	76	10·3	73	9·8	71	10·0	75	9·7	68	10·3	88	8·6	74	7·6	71	7·1	72	6·9	73	6·7	76	8·56	77·0
7·1	58	7·2	56	7·5	61	7·5	58	7·7	60	8·9	78	7·1	75	6·8	77	6·9	81	6·8	75	7·5	79	7·7	83	7·05	72·9
9·1	67	9·3	72	9·3	75	8·7	70	9·1	74	9·4	77	9·4	84	9·4	88	8·5	82	8·4	87	8·6	93	7·7	87	8·20	78·4
7·3	47	7·1	48	6·6	44	6·5	**43**	7·3	53	6·9	58	6·4	58	6·9	71	5·5	60	5·2	58	5·2	65	5·4	70	7·11	66·5
6·4	55	6·7	51	6·2	50	6·7	53	6·5	56	6·7	63	6·4	64	6·5	68	5·9	65	5·5	64	5·6	69	5·6	69	5·99	65·3
7·2	75	7·6	86	8·0	90	8·0	87	8·4	91	8·1	89	8·3	93	8·2	93	7·9	93	7·7	94	7·0	89	6·7	88	6·88	82·4
7·1	61	6·8	58	7·1	55	6·6	53	6·4	54	7·4	65	7·9	85	7·2	82	6·1	68	6·0	69	6·0	69	5·6	68	6·48	72·5
9·19	66·0	9·24	65·6	9·24	65·3	9·24	**65·2**	9·19	65·9	9·22	69·5	**9·27**	74·5	8·99	75·6	8·68	77·7	8·66	79·2	8·46	79·9	8·43	81·5	8·83	75·4

September 1882. Direction and Velocity

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	NNW	8	WNW	2	W	12	WNW	2	NNW	14	WNW	6	W	2	NNW	6	NNW	1	NNW	9	NNE	3	NNW	0
2	SW	3	SW	3	SW	3	SW	2	SSW	2	S	3	SSW	4	WSW	3	WSW	2	SW	3	SW b W	5	SW b W	6
3	NW	4	NW	4	WNW	3	NNW	3	WNW	3	NNW	3	NW	3	NW	3	NNW	3	WNW	3	NW	3	NNW	3
4	NNW	2	„	2	N	2	NNE	2	NNE	1	ENE	1	ENE	2	NNW	3	N	3	N	3	N	2	N	3
5	„	4	NNW	3	NNW	2	NNW	3	NNW	2	NNW	3	NNW	3	ENE	3	ENE	3	ENE	3	ENE	3	NNE	3
6	N	1	N	1	„	1	NNE	1	E	3	E	3	E	3	SSE	2	SSE	1	S	2	SE	3	SE	4
7	SE	2	SE	2	SE	1	SE	2	SE	2	SE	3	SE	3	SE	3	SE	2	SE	2	„	2	ESE	2
8	W	2	W	2	W	2	W	1	W	1	C	0	W	1	W	1	SW	1	C	0	E	1	E	2
9	S	2	S	3	S	2	S	2	E	1	E	1	SE	2	SE	2	SE	2	E	2	„	3	„	4
10	ESE	2	ESE	2	ESE	3	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	3	ESE	4	„	6
11	„	3	„	3	„	3	„	3	„	4	SE	3	SE	5	SE	4	SE	5	„	5	„	6	ESE	5
12	E	2	E	2	E	2	E	2	E	3	E	2	E	4	ESE	2	ESE	3	„	2	„	2	„	3
13	S	4	S	5	S	7	S	7	S	4	SSW	6	SSW	7	SSW	7	SW b S	8	SW b S	7	SW b S	7	SSW	6
14	SW	3	SW	3	„	2	„	3	„	3	„	3	„	3	„	3	SSW	2	SSW	1	SSW	2	„	2
15	W	1	W	1	C	0	WNW	1	WNW	1	WNW	1	WNW	1	WNW	1	SW	2	SW	2	NW	2	WNW	2
16	NW	1	NW	1	NW	1	NW	1	NW	2	NW	2	NE	2	ENE	2	ENE	3	ENE	2	NE	3	NW	3
17	„	1	„	1	„	2	„	1	N	2	N	2	N	2	N	2	NW	2	NW	2	N	1	„	1
18	SSE	5	SSE	5	SSE	5	SSE	4	SSE	5	SSE	5	SSE	5	SSE	4	SSE	5	SSE	5	ESE	6	ESE	6
19	ESE	5	ESE	4	ESE	4	ESE	5	ESE	8	ESE	9	ESE	4	ESE	4	ESE	3	ESE	1	SW	2	SW	4
20	NW	1	NW	3	NW	3	WNW	2	NW	3	NW	3	NW	3	NW	3	NW	4	NW	4	NW	4	NW	5
21	„	4	„	5	„	6	NW	6	„	4	„	5	WNW	5	WNW	5	„	5	„	5	„	5	„	4
22	C	0	C	0	C	0	C	0	NNE	1	NNE	1	ENE	1	ENE	2	ESE	2	ESE	3	ESE	3	ESE	3
23	SE	5	SE	4	SE	4	SE	4	ESE	5	ESE	4	ESE	5	ESE	5	„	5	„	6	„	7	„	7
24	ESE	4	E	4	E	4	„	4	SE	4	E	3	„	3	„	4	„	3	„	3	„	3	„	3
25	SE	3	SSE	3	SSE	4	SSW	4	SW	4	SW	5	WSW	5	W	5	WNW	5	NW	5	NW	5	NW	4
26	NW	3	NW	4	NW	4	NNW	5	NNW	6	NNW	5	NNW	6	NNW	5	NNW	5	NNW	5	NNW	5	NNW	5
27	NNE	2	NNE	2	N	2	N	2	N	2	N	2	N	2	NNE	3	NNE	2	NNE	2	NNE	2	NNE	2
28	ENE	1	ENE	1	NE	1	NE	2	ENE	1	ENE	2	ENE	2	ENE	2	ENE	2	NNW	1	NW	1	NW	1
29	NNE	2	NNE	2	N	3	NNW	3	NNE	3	NNE	4	NNE	3	N	3	NNE	4	NNE	4	NNE	4	NNE	3
30	ENE	1	C	0	C	0	WNW	2	NW	1	NNW	2	NE	2	NNW	3	NNW	4	NNW	3	NNW	4	N	4
Mean		2·5		2·6		2·9		2·7		3·2		3·1		3·2		3·2		3·1		3·3		3·4		3·5

October 1882. $\varphi = +62° 38' 52''$.

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	WNW	1	WNW	2	WNW	1	WNW	1	WNW	1	WNW	2	WSW	1	SSW	2	SSW	3	SSW	3	SSW	3	SSW	4
2	SSW	5	SSW	4	SSW	5	S	3	S	3	S	4	S	5	S	5	„	6	„	7	„	4	„	8
3	„	2	„	1	„	1	C	0	C	0	SSW	1	SSW	1	SSW	1	S	1	SSE	2	SE	2	„	3
4	S	2	S	3	S	3	S	2	S	2	SSE	3	SSE	4	SSE	3	SE	3	SE	3	SSE	3	S	4
5	SSE	1	C	0	NW	1	NW	1	NW	1	NW	3	NW	3	NW	3	NW	3	NW	5	NNW	4	NNW	4
6	E	3	ESE	3	E	4	E	4	E	5	E	5	ESE	5	ESE	5	ESE	5	ESE	5	ESE	5	ESE	5
7	ESE	2	„	3	ESE	2	ESE	3	SSE	3	SSE	3	SSE	3	SSE	3	SSE	5	SSE	4	SSE	4	SSE	3
8	E	1	E	1	E	1	E	2	E	1	E	2	ENE	2	SSW	2	SSW	2	SSW	1	E	2	SE	2
9	SSE	2	SSE	2	SSE	2	SSE	2	SSE	2	SSE	2	SSE	3	SSE	4	SSE	3	SSE	3	SSE	2	S	2
10	SE	2	SE	1	„	2	„	2	WSW	1	WNW	2	NNW	3	NNW	5	NNW	5	NNW	4	NNW	4	NNW	4
11	NNW	4	NNW	4	N	3	N	4	N	3	N	3	N	3	N	3	N	3	NNE	3	NNE	3	NNE	3
12	ENE	3	ENE	3	ENE	2	ENE	2	ENE	2	NE	3	NE	2	NE	3	NE	3	NE	2	ENE	3	ENE	3
13	E	3	E	3	E	3	E	2	„	3	ENE	2	ENE	2	ENE	2	E	3	ENE	4	E	3	„	3
14	„	2	„	2	„	2	„	2	E	2	E	3	E	3	E	3	„	3	ESE	4	ESE	4	ESE	4
15	ESE	3	ESE	3	SE	2	SSE	3	SSE	4	SSE	4	SSE	4	SSE	4	SSE	4	SSE	4	SSE	4	SSE	4
16	C	0	C	0	C	0	C	0	C	0	NW	1	NW	1	NW	1	NW	2	NNW	2	NNW	3	NNW	3
17	WNW	3	WNW	3	WNW	2	WNW	2	WNW	2	WNW	2	WNW	1	WNW	1	WNW	1	WNW	1	WNW	1	WNW	1
18	E	2	E	2	E	2	E	2	E	1	E	1	E	1	ENE	2	ESE	2	E	3	E	4	E	4
19	NNW	3	NNW	2	NNW	3	NNW	2	NNW	3	NNW	2	NNW	3	NNW	4	NNW	3	NNW	3	NNW	4	NNW	4
20	C	0	C	0	C	0	C	0	C	0	„	1	NW	1	NW	1	NW	2	NW	1	NW	1	„	1
21	E	3	E	4	E	5	E	5	E	5	E	4	ESE	3	ESE	3	ESE	4	ESE	3	ESE	4	SE	3
22	„	2	„	3	„	2	„	3	„	1	„	1	C	0	ENE	1	ENE	1	ENE	1	C	0	C	0
23	C	0	C	0	C	0	C	0	C	0	C	0	„	0	C	0	C	0	C	0	„	0	„	0
24	NNW	1	NNW	1	NNW	1	NNW	1	NNW	1	NNW	1	NNW	1	NNW	1	NNW	1	ENE	1	ENE	1	ENE	1
25	ESE	2	ESE	2	ESE	2	ESE	1	ESE	1	ESE	1	E	2	E	2	E	2	E	2	ESE	2	ESE	2
26	ENE	4	„	4	E	3	„	4	„	4	„	4	ESE	5	ESE	4	SSE	3	SE	2	SE	3	SE	2
27	ESE	4	„	6	„	5	„	5	„	6	„	6	„	6	„	4	ESE	5	ESE	4	ESE	5	ESE	5
28	SE	5	SE	4	SE	6	SE	6	SE	6	„	6	„	7	„	7	„	6	„	5	„	5	SE	6
29	ESE	4	ESE	5	„	3	ESE	5	ESE	4	„	4	SE	4	SE	3	SE	3	SE	3	SW	3	SW	2
30	NNW	3	NNW	3	NNW	3	NNW	2	NNW	3	NNW	3	NNW	3	NNW	3	NW	4	NNW	3	NNW	5	NNW	5
31	„	5	„	5	„	8	„	5	„	5	„	5	„	5	„	4	N	5	„	5	„	5	„	5
Mean		2·5		2·5		2·5		2·5		2·4		2·7		2·8		2·9		3·1		3·0		3·1		3·2

in metres per second. *September* 1882.

1	2	3	4	5	6	7	8	9	10	11	Midnight.	Mean Velocity.
D. V.	D. V.	D. V.	D. V.	D. V.	D. V.	D. V.	D. V.	D. V.	D. V.	D. V.	D. V.	
WNW 4	WNW 3	W 1	W 2	W 1	C 0	C 0	SE 1	SW 2	SW 2	SW 3	SW 3	3·6
SW b W 5	SW b W 4	SW b W 4	NW b W 7	NW b W 1	NW b W 9	NW b W 1	NNW 4	NNW 6	NNW 15	NNW 0	NW 0	4·0
WSW 3	NNW 2	NNW 2	NNW 2	NNW 2	NNW 2	NNW 2	„ 1	„ 1	„ 3	„ 2	NNW 2	2·6
ENE 3	ENE 3	ENE 3	ENE 3	ENE 3	ENE 4	ENE 2	NNE 1	NNE 2	NNE 3	NE 4	„ 3	2·5
„ 3	„ 2	NW 2	NNE 2	N 2	N 1	N 1	C 0	C 0	N 1	N 1	N 1	2·1
SE 4	SE 4	SE 4	S 5	SE 5	SE 4	SE 5	S 4	S 3	S 2	SSE 2	S 2	2·9
ESE 2	ESE 2	E 2	E 1	C 0	NW 1	NW 1	NW 4	NW 2	NW 1	NNW 2	W 2	1·9
E 2	E 2	„ 2	SE 2	SE 2	SE 1	E 1	E 1	C 0	S 1	S 1	S 1	1·3
„ 4	„ 5	„ 5	E 5	E 4	E 4	„ 3	„ 3	E 2	ESE 3	ESE 3	ESE 2	2·9
ESE 5	ESE 4	ESE 4	ESE 3	ESE 4	ESE 4	ESE 2	ESE 1	ESE 2	„ 2	„ 2	„ 2	2·8
„ 5	„ 4	„ 4	„ 3	„ 3	„ 3	„ 2	„ 1	„ 1	„ 1	„ 1	„ 2	2·9
WSW 3	WSW 4	WSW 3	SSW 5	SSW 5	SSW 5	SSW 3	SSW 3	SW 4	SW 4	S 2	S 1	3·0
SSW 5	SW 5	SW 6	SW 5	„ 6	SW 6	SW 5	SW 5	„ 4	„ 4	SW 4	SW 4	5·6
„ 2	SSW 2	SSW 2	SSW 1	SW 1	SSW 2	NW 1	W 2	W 1	W 1	W 1	W 1	2·0
WNW 2	NW 2	ENE 1	ENE 1	ENE 1	C 0	„ 1	NW 1	NW 1	NW 2	NW 2	NW 1	1·3
NE 3	NNE 2	NNW 2	NNE 2	NE 2	NW 2	„ 2	N 2	N 1	N 1	N 1	N 1	1·8
W 2	SE 1	SE 2	SE 2	SSE 2	SSE 2	SSE 2	SSE 3	SSE 3	SSE 3	SSE 3	SE 4	2·0
E 5	ESE 5	ESE 5	ESE 5	ESE 4	ESE 3	SE 3	SE 2	ESE 3	ESE 3	ESE 4	ESE 2	4·3
SW 4	W 5	WSW 6	WSW 5	WNW 5	WNW 2	WNW 1	SW 1	SW 3	SW 4	NW 3	NW 4	4·0
NW 5	NW 5	NW 5	NW 5	NW 6	NW 5	NW 6	NW 5	NW 6	NW 4	„ 4	„ 5	4·1
NNW 4	NNW 4	NNW 4	NNW 4	NNW 3	NNW 2	NNW 2	N 1	NNE 2	NNE 1	C 0	C 0	3·6
ESE 3	ESE 3	ESE 3	ESE 3	ESE 4	SE 4	SE 10	SE 5	SE 4	SE 3	SE 4	SE 4	2·8
„ 7	„ 6	„ 6	SE 6	„ 6	„ 5	„ 5	„ 3	ESE 4	ESE 4	ESE 3	E 3	5·0
„ 3	„ 3	„ 3	ESE 4	SE 5	„ 5	ESE 4	ESE 4	„ 4	„ 4	„ 5	ESE 4	3·8
NW 4	WNW 4	WNW 3	NNW 2	NW 2	NNW 2	NNW 2	NNW 2	NW 2	NW 3	NW 2	NW 3	3·5
NNW 5	NNW 5	NNW 4	N 4	N 3	N 3	N 3	N 3	N 3	N 3	NNE 4	NNE 2	4·2
N 3	NNE 3	NNE 3	NNE 3	NNE 3	NNE 3	„ 3	NE 2	NNE 2	NE 1	ENE 1	ENE 1	2·2
NW 1	NNW 2	N 2	„ 2	„ 3	„ 1	NNE 2	N 2	N 2	N 2	NNE 2	NNE 2	1·7
NE 3	NE 3	NE 4	„ 3	ENE 2	ENE 1	ENE 2	ENE 1	ENE 1	ENE 1	ENE 1	ENE 1	2·5
NNW 5	NNW 3	NNW 3	NNW 2	NNW 2	NNW 2	NW 2	NW 2	N 2	NW 2	NNW 2	WNW 2	2·3
3·6	3·4	3·3	3·3	3·1	2·9	2·6	2·3	2·4	2·8	2·3	2·2	3·0

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. *October* 1882.

1	2	3	4	5	6	7	8	9	10	11	Midnight.	Mean Velocity.
D. V.	D. V.	D. V.	D. V.	D. V.	D. V.	D. V.	D V.	D. V.	D. V.	D. V.	D. V.	
SSW 4	S 5	SSW 6	S 6	S 6	S 4	S 5	S 6	S 5	S 5	SSW 6	SSW 8	3·8
„ 7	SSW 6	„ 5	SSW 5	SSW 3	SSW 6	SSW 2	SSW 1	SSW 1	SSW 2	„ 3	„ 3	4·3
„ 3	„ 2	SW 2	SW 2	„ 1	ESE 2	ESE 2	ESE 1	ESE 1	SE 1	SSE 2	SSE 2	1·5
S 5	S 6	S 5	SSE 4	SSE 3	SSE 3	SSE 4	SSE 4	SSE 2	SSE 3	„ 1	„ 3	3·3
NNW 3	NNW 3	NNW 2	NNE 2	NNE 2	NNE 2	NE 2	NE 2	E 2	E 2	E 1	E 1	2·2
ESE 5	ESE 5	ESE 4	ESE 4	ESE 6	ESE 5	ESE 5	ESE 4	ESE 4	ESE 5	ESE 5	ESE 4	4·6
SSE 2	SE 2	E 2	E 2	E 2	E 2	E 2	E 2	E 1	E 1	E 2	E 2	2·5
SE 2	SSE 2	SSE 2	SSE 2	„ 3	„ 2	„ 2	„ 2	ESE 2	ESE 3	ESE 2	ESE 2	1·9
ESE 2	ESE 2	ESE 4	„ 5	SSE 4	SSE 5	SSE 5	SE 3	SE 2	SE 2	SE 2	SE 2	2·8
NNW 3	NNW 4	NNW 3	NNW 3	NNW 2	NNW 2	NNW 3	NNW 3	NNW 3	NNW 3	NNW 2	NNW 3	2·9
NNE 4	NNE 3	NNE 4	NNE 3	NNE 3	NNE 3	NNE 3	NNE 3	NNE 3	NNE 2	ENE 3	ENE 3	3·2
ENE 3	ENE 3	ENE 2	ENE 2	ENE 2	ENE 2	ENE 2	ENE 3	E 3	E 4	E 3	E 3	2·6
„ 3	„ 3	E 2	„ 2	„ 2	„ 1	„ 2	„ 2	ENE 2	„ 3	„ 2	„ 2	2·5
ESE 4	ESE 4	ESE 4	ESE 4	ESE 4	ESE 4	SE 4	ESE 4	ESE 3	ESE 5	ESE 4	ESE 4	3·4
SSE 4	SSE 5	SSE 6	SSE 7	SSE 5	SSE 4	SSE 5	SSE 5	SSE 4	SSE 4	SSE 3	S 2	4·0
NNW 3	NW 3	NNW 3	NNW 3	W 3	WNW 2	WNW 2	WNW 3	NW 3	NW 4	NNW 3	NNW 3	2·0
ESE 1	ESE 1	ESE 1	SSE 2	SSE 2	SSE 4	SSE 3	SSE 3	SSE 3	SSE 1	ESE 2	E 1	1·8
E 4	ENE 4	ENE 3	ENE 2	ENE 1	ENE 1	ENE 1	ENE 1	E 1	ESE 1	NNW 1	NNW 2	2·0
NNW 4	NNW 4	NNW 3	N 4	NNW 2	NNW 2	NNW 3	NNW 2	NNW 2	NNW 2	„ 2	„ 1	2·8
N 2	N 2	N 1	„ 1	N 1	NNE 1	ESE 1	SE 2	ESE 2	E 3	E 2	E 3	1·2
SE 3	SE 3	ESE 4	ESE 4	ESE 5	ESE 5	E 5	E 4	E 4	ENE 4	„ 3	„ 4	3·9
ENE 1	NNW 1	NNW 1	C 0	C 0	C 0	C 0	NNW 1	NWW 1	NNW 1	C 0	C 0	0·9
C 0	„ 1	„ 2	NNW 1	„ 0	NNW 1	„ 0	„ 1	„ 1	„ 1	NNW 1	NNW 1	0·4
ENE 2	ENE 2	ENE 2	ENE 1	ENE 2	ENE 2	E 2	E 2	ENE 2	ENE 2	ENE 2	E 2	1·5
ESE 3	ESE 3	ESE 4	ESE 4	ESE 4	ESE 4	ESE 5	ESE 5	E 5	„ 4	„ 4	ENE 4	2·9
SE 4	SE 3	SE 6	„ 5	„ 5	„ 5	„ 5	„ 5	ESE 5	ESE 4	ESE 4	ESE 6	4·1
ESE 5	ESE 5	SSE 5	SSE 5	„ 5	SE 6	SE 5	SE 4	„ 5	„ 5	„ 5	SE 4	5·0
SSE 3	SE 5	SE 4	SE 4	SE 4	„ 5	„ 5	„ 4	SE 3	SE 3	SE 4	ESE 3	4·8
NW 2	NW 2	NW 2	NW 2	NNW 2	NNW 2	NNW 2	NNW 2	NNW 2	NNW 3	NNW 3	NNW 3	2·9
NNW 5	NNW 4	NNW 5	NNW 4	„ 5	„ 5	„ 4	„ 4	„ 4	„ 4	„ 5	„ 6	4·0
„ 5	„ 5	„ 5	„ 5	„ 4	„ 4	„ 4	„ 4	„ 3	„ 2	WNW 1	WNW 1	4·5
3·3	3·3	3·4	3·3	3·0	3·1	3·1	3·0	2·7	2·9	2·7	2·8	2·9

November 1882. Direction and Velocity

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	WNW	1	WNW	1	SW	1	S	2	SW	2	S	1	SSW	2	SSW	2	SSW	3	SSW	1	SSW	2	SSW	3
2	S	7	SSW	9	SSW	4	SSW	6	S	5	SSW	4	,,	5	,,	4	SW	5	SW	5	,,	3	,,	3
3	NNW	5	NNW	6	NNW	5	NNW	5	NNW	5	NNW	3	NNE	3	NNE	2	NNE	2	NNE	2	NNE	2	NNE	1
4	NE	1	NE	1	NE	1	NE	1	C	0	NNE	1	,,	1	NE	1	NE	1	N	1	NNW	3	NNW	5
5	NW	6	NW	6	NW	7	NW	6	NW	5	NW	5	N	5	NNE	5	N	5	NNW	5	N	5	N	5
6	N	3	N	3	N	2	N	3	N	2	N	2	,,	2	N	2	,,	2	N	2	,,	1	,,	1
7	,,	4	NNW	3	NW	2	NW	3	NW	2	NW	2	WNW	3	WNW	3	NW	3	NW	3	NW	3	WNW	3
8	NW	2	NW	2	NW	2	C	0	C	0	C	0	C	0	C	0	C	0	SSE	1	SSE	2	SSE	2
9	C	0	NNE	1	NNE	2	NNE	1	NNE	2	NNE	2	NNW	1	NNW	1	NNW	1	NNW	1	SSW	1	SSW	2
10	SSW	1	SSW	2	SSE	3	SSE	3	SSE	3	ESE	3	SE	3	SE	3	SE	3	SE	2	SE	2	SE	2
11	SW	1	SW	1	SW	1	SW	1	C	0	C	0	C	0	C	0	C	0	C	0	C	0	S	1
12	SE	1	C	0	SE	1	SE	1	,,	0	SE	1	SE	1	ESE	1	ESE	1	ESE	1	ESE	2	ESE	3
13	SW	5	WSW	6	WSW	2	WSW	6	NW	5	NW	5	NW	7	NW	7	NW	7	NW	7	NW	8	NW	7
14	E	2	E	2	E	2	E	2	E	3	E	2	E	1	E	1	E	2	ESE	3	ESE	4	ESE	3
15	C	0	SE	2	SE	3	SE	3	ESE	4	ESE	3	SSE	3	S	4	S	3	S	3	S	4	S	4
16	SSE	7	SSE	8	SSW	6	SSW	8	SSW	7	SSW	6	SSW	4	SW	4	SW	6	SW	6	SW	5	W	4
17	N	1	N	1	N	1	N	1	N	1	C	0	C	0	C	0	C	0	C	0	ESE	1	ESE	1
18	E	1	SE	1	C	0	C	0	C	0	,,	0	,,	0	,,	0	,,	0	,,	0	C	0	C	0
19	ESE	1	ESE	1	ESE	1	ESE	1	E	2	ENE	1	ENE	1	ENE	1	ENE	1	NNW	2	NNW	2	NNW	2
20	NNW	2	NNW	2	NNW	2	N	2	N	3	N	2	NNW	1	NNW	1	NNW	1	,,	1	C	0	C	0
21	NNE	1	NE	1	ESE	1	ESE	1	ESE	1	ESE	1	ESE	1	C	0	ESE	1	ESE	1	C	0	,,	0
22	C	0	C	0	ENE	1	ENE	1	C	0	C	0	C	0	,,	0	C	0	C	0	,,	0	,,	0
23	ESE	3	E	2	E	2	E	1	E	1	E	1	E	1	,,	0	,,	0	,,	0	ENE	1	,,	0
24	SSE	2	SSE	2	SSE	1	SSE	1	ESE	1	ESE	3	ESE	3	SSE	3	SSE	3	SSE	3	SSE	2	SSE	2
25	ESE	1	C	0	C	0	SE	1	SE	1	SSE	2	SSW	3	SSW	3	SSW	2	S	2	SW	2	WSW	2
26	,,	2	ESE	2	NNE	3	NNE	4	NNE	3	NNE	3	NNE	4	NNE	3	NNE	3	NNE	3	NNE	3	NNE	3
27	NW	5	NW	4	NW	5*	WNW	4	WNW	4	WNW	5	NW	4	NW	4	WNW	3	WNW	2	NW	2	WNW	1
28	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	ENE	2	ENE	4	ENE	4	ENE	4
29	NNW	8	NNW	8	NNW	8	NNW	7	NNW	5	NNW	6	NNW	7	NNW	6	NNW	5	NW	3	NW	3	NNW	3
30	,,	4	,,	4	,,	4	,,	2	,,	2	,,	2	,,	3	,,	2	,,	2	NNW	2	NNW	2	,,	1
Mean -		2·6		2·7		2·4		2·6		2·3		2·2		2·3		2·1		2·2		2·2		2·3		2·3

* One hemispherical cup found broken off.

December 1882. $\varphi = +62^\circ\ 38'\ 52''$.

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	N	1	N	2	N	1	N	1	N	1	N	1	N	1	N	1	C	0	C	0	C	0	C	0
2	C	0	C	0	NE	1	C	0	C	0	C	0	C	0	C	0	,,	0	,,	0	,,	0	,,	0
3	ENE	1	ENE	1	NNE	1	,,	0	NNE	1	NNE	1	N	2	N	2	N	3	N	2	N	2	NNW	2
4	C	0	NNW	1	NNW	2	NNW	1	WNW	1	WNW	1	WNW	1	WNW	1	NW	3	NW	2	NW	2	NW	1
5	NNW	5	,,	5	,,	5	,,	5	NNW	5	NNW	6	NNW	6	NNW	6	NNW	4	NNW	4	NNW	3	,,	3
6	SW	1	SW	2	SSE	1	SSE	2	SSE	3	SSE	3	SSE	2	S	2	S	3	S	3	S	3	S	2
7	ESE	2	ESE	1	ESE	1	ESE	1	ESE	1	ESE	2	ESE	5	ESE	5	ESE	5	ESE	5	ESE	3	ESE	2
8	C	0	C	0	C	0	C	0	NNW	1	NNW	1	NNW	1	NNW	1	NW	1	NNW	2	NW	1	NW	2
9	NNW	2	NNW	2	NNW	2	NNW	3	,,	2	,,	3	,,	3	,,	2	NNW	3	,,	3	NNW	4	NNW	4
10	NNE	4	NNE	3	,,	3	,,	3	,,	2	,,	3	,,	3	,,	2	NNW	2	,,	3	,,	2	,,	2
11	N	2	N	2	N	3	N	3	N	4	N	3	N	1	N	1	N	2	N	2	N	1	N	1
12	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0
13	N	1	N	1	N	1	N	1	N	1	N	1	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0
14	C	0	C	0	C	0	C	0	C	0	C	0	,,	0	,,	0	,,	0	,,	0	SSE	1	,,	0
15	E	1	,,	0	,,	0	,,	0	,,	0	,,	0	E	1	ESE	2	ESE	2	E	3	E	3	E	4
16	NNW	3	NNW	2	NNW	1	NNW	1	NNW	1	NNW	1	C	0	C	0	C	0	C	0	C	0	C	0
17	C	0	C	0	C	0	C	0	C	0	C	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0
18	NNW	2	NNW	1	,,	0	NNW	1	,,	0	NNW	1	NNW	1	NNW	2	NNW	1	NNW	1	NNW	1	NNW	1
19	,,	1	,,	1	NNW	2	,,	1	,,	0	C	0	,,	1	C	0	,,	1	C	0	C	0	C	0
20	C	0	C	0	C	0	C	0	,,	0	,,	0	C	0	,,	0	C	0	,,	0	,,	0	,,	0
21	ESE	1	ESE	1	ESE	1	ESE	2	ESE	2	ESE	2	ESE	2	ESE	1	ESE	3	ESE	3	ESE	3	ESE	2
22	,,	1	,,	1	,,	1	,,	1	,,	1	,,	2	,,	3	,,	1	,,	3	,,	3	,,	4	,,	3
23	C	0	C	0	C	0	C	0	WNW	1	WNW	2	WNW	1	WNW	1	WNW	1	WNW	2	WNW	4	WNW	2
24	,,	0	,,	0	,,	0	,,	0	C	0	C	0	C	0	C	0	C	0	ESE	1	ESE	1	ESE	1
25	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	C	0	C	0	C	0
26	ESE	6	ESE	3	ESE	3	SE	4	SE	3	SE	5	SE	4	ESE	3	ESE	3	ESE	2	ESE	2	ESE	1
27	SSW	1	SSW	1	SSW	2	SSW	4	SSW	5	SSW	5	SSW	4	SSW	3	SSW	2	WSW	2	W	3	WNW	2
28	NNW	7	NNW	8	NNW	7	NNW	7	NNW	6	NNW	6	NNW	4	NNW	4	NNW	4	NNW	4	NNW	5	NNW	5
29	,,	1	,,	1	,,	1	C	0	C	0	,,	1	C	0	C	0	C	0	C	0	C	0	C	0
30	C	0	C	0	C	0	NNW	1	NNW	4	NNW	4	NNW	4	NNW	3	NNW	2	NNW	3	NNW	4	NNW	5
31	NNW	2	NNW	2	NNW	2	,,	1	,,	1	,,	1	,,	1	,,	1	,,	1	C	0	,,	1	C	0
Mean -		1·5		1·3		1·3		1·4		1·5		1·8		1·6		1·4		1·6		1·6		1·7		1·5

in metres per second.

Fort Rae.

November 1882.

1		2		3		4		5		6		7		8		9		10		11		Midnight		Mean Velocity.
D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
SSW	4	SSW	4	SSW	3	S	5	S	5	S	5	SSW	6	S	6	S	7	S	8	S	8	S	8	3·8
,,	2	,,	2	,,	1	SSW	1	SSW	1	NW	2	NNW	2	NNW	2	NNW	5	NNW	5	NNW	9	NNW	4	4·0
NNE	1	NNE	1	NNE	2	NNE	2	NE	1	NE	1	NE	1	NE	1	NE	1	NE	1	NE	1	NE	1	2·3
NNW	5	NW	5	NNW	7	NNW	7	NNW	7	NNW	6	NNW	6	NNW	6	NNW	6	NNW	5	NNW	5	NNW	6	3·7
N	6	N	5	N	5	N	5	N	5	N	4	N	5	N	4	N	5	N	5	N	5	N	4	5·1
,,	1	N	1	,,	1	,,	2	,,	2	,,	3	,,	4	,,	4	,,	5	,,	4	,,	3	,,	3	2·5
NNW	3	WNW	3	WNW	3	WNW	2	WNW	2	WNW	3	WNW	3	WNW	2	WNW	2	WNW	2	WNW	2	NW	2	2·6
ESE	3	ESE	3	ESE	3	ESE	4	ESE	4	ESE	4	E	4	E	4	E	4	E	3	E	2	E	1	2·1
SSW	1	SSW	2	SSW	2	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	0·8
SE	2	SE	2	SE	2	SSE	2	SSE	3	S	3	S	3	S	3	SSW	2	SSW	2	SSW	3	SW	2	2·5
S	1	SSE	2	,,	2	SE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	3	SE	2	SE	1	1·2
ESE	4	ESE	3	SSE	4	SSE	4	SSE	4	SSE	3	SSE	3	SSW	5	SSW	5	SSW	5	SSW	6	SSW	6	2·7
NW	6	NW	5	NW	4	NW	3	NW	2	NW	2	WNW	2	C	0	C	0	C	0	C	0	NE	1	4·0
ENE	2	ENE	2	ENE	2	ENE	1	ENE	1	ENE	1	ENE	1	,,	0	,,	0	ENE	1	ENE	1	C	0	1·6
S	4	SSE	4	SSE	5	SSE	4	SSE	4	SSE	4	SSE	4	SSE	4	SSE	3	SSE	4	SSE	6	SSE	7	3·7
W	3	NW	2	NW	1	C	0	NW	1	NW	1	NNW	2	N	2	N	2	NNW	2	N	2	N	1	3·8
SSE	1	SSE	1	SE	1	SE	1	SE	1	SE	1	ESE	1	ESE	1	ESE	1	SE	1	SE	1	SE	1	0·8
SE	1	SE	1	C	0	,,	1	ENE	1	ENE	1	ENE	1	ENE	1	ENE	2	ENE	1	C	0	C	0	0·5
NNW	2	NNW	3	NNW	3	NNW	3	NNW	3	NNW	3	NNW	3	NNW	2	NNW	3	NNW	2	NNW	3	NNW	2	2·0
,,	1	,,	1	C	0	C	0	C	0	C	0	,,	1	C	0	C	0	C	0	NNE	1	NNE	1	0·9
C	0	C	0	,,	0	,,	0	,,	0	,,	0	C	0	,,	0	,,	0	,,	0	C	0	C	0	0·4
,,	0	ESE	3	ESE	3	ESE	3	ESE	3	ESE	3	ESE	4	ESE	3	ESE	4	ESE	4	ESE	3	ESE	3	1·6
NNE	1	NNE	1	C	0	C	0	C	0	,,	1	,,	1	SSE	1	,,	1	,,	2	SE	1	SSE	2	1·0
SSE	1	SSE	1	ESE	1	ESE	3	ESE	3	,,	3	,,	2	ESE	3	,,	2	,,	2	ESE	2	ESE	1	2·1
WSW	1	C	0	E	1	E	1	E	1	C	0	E	1	E	1	E	1	NNE	1	NNE	1	ENE	1	1·2
NNE	3	NE	3	NE	3	NE	2	NE	3	NNW	3	NNW	5	NNW	6	NNW	6	NW	6	NW	5	NW	4	3·5
WNW	1	WNW	2†	WNW	2	WNW	1	WNW	1	WNW	1	WNW	1	C	0	C	0	C	0	C	0	C	0	2·2
ENE	4	ENE	5	ENE	4	NE	4	NE	4	NE	2	NNW	3	NNW	4	NNW	5	NNW	6	NNW	8	NNW	8	3·0
NNW	2	NNW	3	NNW	2	NNW	2	NNW	3	NNW	3	,,	2	,,	3	,,	3	,,	3	,,	3	,,	3	4·2
,,	1	,,	2	,,	2	,,	2	,,	1	,,	1	,,	1	,,	1	,,	1	,,	1	,,	1	,,	1	1·9
	2·2		2·4		2·3		2·2		2·3		2·2		2·5		2·4		2·6		2·6		2·8		2·5	2·4

λ = −115° 43′ 50″ = −7h. 42m. 55s.

† Anemometer repaired.

December 1882.

1		2		3		4		5		6		7		8		9		10		11		Midnight.		Mean Velocity.
D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	NNE	1	C	0	NNE	2	NNE	2	0·6
,,	0	NE	1	NE	1	ESE	2	ESE	3	ESE	4	ESE	4	E	3	E	3	E	3	E	2	E	2	1·2
NNW	3	NNW	4	NNW	4	NNW	3	NNW	4	NNW	4	NNW	3	NNW	2	NNW	3	NNW	2	NNW	2	NNW	1	2·2
NW	2	NW	2	NW	2	NW	2	NW	1	NW	1	,,	1	,,	2	,,	2	,,	3	,,	3	,,	5	1·8
,,	3	WNW	3	WNW	2	WNW	2	WNW	1	WNW	2	WNW	2	WNW	1	C	0	C	0	C	0	SW	1	3·1
SSE	2	SSE	2	SSE	2	SSE	2	SSE	2	SSE	2	SSE	2	SSE	2	SSE	2	SSE	2	ESE	3	ESE	2	2·1
ESE	1	ESE	2	ESE	2	C	0	ESE	1	ESE	1	ESE	1	ESE	2	ESE	2	ESE	1	C	0	C	0	1·9
NW	2	NNW	2	NNW	3	NNW	4	NNW	3	NNW	2	WNW	1	WNW	1	NNW	1	NNW	1	NNW	2	NNW	1	1·4
NNW	3	,,	3	,,	3	,,	3	,,	4	,,	4	NNW	3	NNW	4	,,	4	,,	3	NNE	4	NNE	3	3·1
N	2	N	2	N	2	N	3	N	2	N	2	,,	1	N	1	C	2	C	1	N	2	N	2	2·2
	1		3		1	,,	2	,,	1	,,	1	C	0		1		0		0		0		0	1·5
C	0	C	0	C	0	C	0	C	0	C	0	,,	0	C	0	,,	0	N	1	N	1	N	1	0·1
,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	C	0	C	0	C	0	C	0	0·2
,,	0	SSE	1	SSE	3	SSE	3	ESE	2	ESE	4	E	3	E	2	E	1	E	1	E	1	E	1	1·0
ENE	3	ENE	2	ENE	1	ENE	1	C	0	ENE	1	ENE	1	ENE	1	NNW	1	NNW	1	NNW	3	NNW	3	1·5
C	0	,,	1	,,	1	,,	1	ENE	1	C	0	C	0	C	0	ENE	1	ENE	1	ENE	1	ENE	1	0·7
,,	0	C	0	C	0	C	0	C	0	,,	0	,,	0	,,	0	NNW	1	NNW	2	NNW	3	NNW	3	0·4
,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	NNW	1	NNW	1	,,	2	C	0	C	0	,,	1	0·7
,,	0	,,	0	NNW	1	NNW	1	NNW	1	,,	0	C	0	C	0	C	0	,,	0	,,	0	C	0	0·4
,,	0	ESE	1	ESE	1	ESE	1	ESE	1	ESE	2	ESE	1	ESE	1	ENE	2	ENE	2	ESE	1	ESE	1	0·6
,,	0	C	0	C	0	C	0	C	0	C	0	C	0	SE	1	SE	1	SE	1	SE	1	,,	1	1·2
ESE	3	ESE	3	ESE	4	ESE	3	ESE	3	ESE	2	ESE	1	ESE	1	C	0	C	0	C	0	C	0	1·8
WNW	2	WNW	3	WNW	3	WNW	2	WNW	1	C	0	C	0	WNW	1	WNW	1	,,	0	,,	0	WNW	1	1·2
C	0	C	0	ESE	1	SSE	1	ESE	1	ESE	2	ESE	2	ESE	1	C	0	,,	0	,,	0	C	0	0·5
,,	0	,,	0	C	0	C	0	C	0	C	0	,,	2	,,	3	ESE	4	ESE	5	ESE	4	ESE	6	1·0
ESE	1	ESE	1	ESE	2	S	2	SW	3	SSW	1	S	1	S	2	S	1	SSE	1	SSE	1	SSW	2	2·4
C	0	NNW	2	NNW	2	NNW	2	NNW	2	NNW	3	NNW	5	NNW	6	NNW	6	NNW	5	NNW	6	NNW	6	3·3
NNW	4	,,	3	,,	2	NW	1	NW	2	,,	2	,,	2	,,	1	,,	2	,,	2	,,	3	,,	2	3·9
C	0	C	0	C	0	SE	1	ESE	2	ESE	2	ESE	4	ESE	4	ESE	5	ESE	5	ESE	2	ESE	1	1·2
NNW	6	NNW	8	NNW	7	NNW	8	NNW	6	NNW	5	NNW	4	NNW	3	NNW	3	NNW	2	NNW	1	NNW	2	3·5
C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	,,	1	,,	1	,,	1	0·7
	1·2		1·6		1·6		1·6		1·5		1·5		1·5		1·5		1·6		1·5		1·6		1·7	1·5

Winds.

Direction and Velocity

January 1883.

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	NNW	1	NNW	1	C	0	NNW	1	NNW	2	NNW	1	C	0	NNW	1	NNW	2	NNW	2	NNW	2	NNW	1
2	,,	3	,,	2	NNW	2	,,	2	,,	2	,,	2	NNW	3	,,	3	,,	3	,,	2	,,	2	,,	2
3	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0
4	ENE	1	,,	0	,,	0	,,	0	,,	0	,,	0	ESE	1	ESE	2	ESE	2	ESE	3	ESE	3	ESE	3
5	ESE	3	ESE	3	ESE	2	ESE	3	ESE	2	ESE	2	,,	2	,,	2	,,	2	,,	3	,,	3	,,	3
6	,,	1	C	0	C	0	,,	1	C	0	,,	1	,,	1	,,	2	,,	2	,,	1	,,	1	,,	2
7	,,	3	ESE	3	ESE	3	,,	3	ESE	2	,,	1	,,	1	,,	1	,,	3	,,	2	,,	2	,,	2
8	,,	3	,,	2	,,	2	,,	1	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0
9	NNW	5	NNW	5	NNW	4	NNW	4	NNW	4	NNW	4	NNW	4	NNW	3	NNW	2	NNW	2	NNW	1	NNW	1
10	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0
11	NNW	1	NNW	1	NNW	1	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	ESE	1	,,	0
12	C	0	C	0	C	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	C	0	,,	0
13	ESE	2	ESE	2	ESE	3	ESE	2	ESE	2	ESE	3	ESE	1	ESE	1	ESE	1	ESE	1	C	0	,,	0
14	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	N	1	ESE	1	,,	0	,,	0
15	,,	0	NNW	1	NW	2	NW	3	N	3	NNW	9	NNW	9	NNW	9	NNW	11	WNW	11	NNW	10	NNW	10
16	NNW	1	,,	2	NNW	2	NNW	2	NNW	3	,,	2	N	1	N	1	NW	1	C	0	NW	1	C	0
17	WNW	2	WNW	2	WNW	3	WNW	2	WNW	1	WNW	1	N	1	N	1	N	1	NNW	1	N	1	N	1
18	C	0	C	0	C	0	C	0	C	0	NNW	2	SE	2	SE	1	SE	2	SE	2	SE	2	SE	3
19	SSE	2	SSE	1	,,	0	,,	0	WNW	1	WNW	3	NNW	1	NNW	2	NNW	1	NNW	1	NNW	1	NNW	4
20	NW	2	NW	3	NNW	3	NNW	4	NNW	4	NNW	3	,,	3	,,	3	,,	2	,,	2	,,	1	,,	1
21	C	0	C	0	C	0	C	0	C	0	C	0	NNW	1	,,	1	C	0	C	0	C	0	NW	1
22	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	C	0	C	0	,,	0	,,	0	,,	0	C	0
23	,,	0	NNW	1	NNW	1	NNW	1	NNW	1	NNW	1	NNW	2	NNW	2	NNW	2	NNW	1	NNW	1	NNW	1
24	,,	0	ESE	1	ESE	1	ESE	1	SSE	3	ESE	1	SE	2	SE	1	ESE	2	ESE	2	ESE	3	ESE	3
25	N	1	N	1	N	1	N	1	N	1	N	1	N	1	N	2	N	2	N	1	N	1	N	2
26	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0
27	ENE	1	ENE	1	ENE	1	ENE	1	ESE	1	ESE	2	E	2	E	1	ESE	1	ESE	1	ESE	1	,,	0
28	NNW	4	NNW	4	NNW	4	NNW	4	NNW	3	NNW	3	NNW	3	NNW	3	NNW	3	NNW	2	NNW	2	NNW	1
29	C	0	,,	1	N	1	N	2	N	2	N	1	C	0	C	2	C	1	C	1	C	1	C	1
30	N	1	C	0	C	0	C	0	C	0	C	0	,,	0	C	0	C	0	C	0	C	0	C	0
31	NNW	2	NNW	3	NNW	3	NNW	3	NNW	2	NNW	2	NNW	5	NNW	4	NNW	4	NNW	5	NNW	6	NNW	6
Mean -		1·2		1·3		1·3		1·3		1·3		1·5		1·5		1·5		1·6		1·5		1·5		1·5

$\varphi = +62° 38' 52''$.

February 1883.

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	NNW	1	NNW	2	NNW	1	NNW	1	C	0	C	0	C	0	C	0	C	0	C	0	ESE	1	ESE	2
2	SE	1	ESE	1	ESE	1	ESE	1	ESE	1	,,	0	,,	0	,,	0	,,	0	,,	0	NNW	1	NNW	1
3	W	2	WNW	2	NW	5	NW	8	NNW	6	NNW	5	NNW	6	NNW	6	NNW	4	NNW	3	,,	2	,,	2
4	SSW	3	SSE	2	C	0	C	0	SSE	1	SSE	1	SSW	1	C	0	C	0	C	0	C	0	C	0
5	NNW	13	NNW	14	NNW	15	NNW	10	NNW	10	NNW	8	NNW	10	NNW	9	NNW	9	NNW	6	NNW	6	NNW	8
6	,,	2	,,	2	,,	2	,,	2	,,	1	,,	1	C	0	C	0	C	0	C	0	C	0	SSW	1
7	,,	6	,,	7	,,	6	,,	5	,,	5	,,	7	N	7	N	5	N	6	N	6	N	5	N	5
8	NW	1	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	ESE	1	ESE	1	ESE	2
9	NNW	6	NNW	8	NNW	5	NNW	3	WNW	2	WSW	2	WNW	3	WNW	3	WNW	1	SSW	1	W	1	NNW	2
10	N	1	C	0	C	0	C	0	C	0	C	0	ENE	1	C	0	C	0	ESE	1	SE	1	ESE	2
11	NNW	5	NNW	10	NNW	9	NNW	8	NNW	6	NNW	5	NNW	2	NNW	3	NNW	2	NNW	3	NNW	2	NNW	4
12	,,	3	,,	3	,,	3	,,	4	,,	4	,,	4	NW	4	NW	3	NW	3	NW	3	NW	4	,,	6
13	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	ESE	1	ESE	1
14	ESE	1	ESE	1	,,	0	ESE	1	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	C	0	C	0
15	C	0	C	0	,,	0	C	0	N	1	,,	0	NNE	1	,,	0	,,	0	,,	0	,,	0	,,	0
16	,,	0	,,	0	,,	0	,,	0	NNW	1	NNW	1	C	0	NNW	1	NW	2	NW	1	NW	1	WNW	1
17	WNW	5	WNW	5	WNW	5	WNW	5	WNW	4	WNW	4	WNW	5	WNW	5	WNW	5	WNW	6	WNW	6	,,	4
18	NNW	2	NNW	1	C	0	C	0	C	0	C	0	SSE	1	SSE	1	C	0	C	0	,,	1	,,	1
19	WNW	3	WNW	1	WNW	1	WNW	1	WNW	2	WNW	3	WNW	3	NW	3	NW	3	NW	3	,,	2	,,	2
20	,,	1	,,	1	,,	2	,,	2	,,	2	WSW	3	WSW	2	SW	2	WNW	1	WNW	3	,,	2	,,	1
21	C	0	NE	1	ENE	2	ESE	3	ESE	3	ESE	3	ESE	3	ESE	4	ESE	3	ESE	3	ESE	5	ESE	5
22	ESE	3	ESE	1	C	0	NE	1	NNE	1	NNE	1	NNE	1	NNW	1	NNW	2	NNW	4	NNW	4	NNW	5
23	NW	3	NW	2	NW	2	WNW	3	WNW	3	WNW	3	WNW	3	WNW	3	WNW	3	WNW	3	WNW	2	NW	2
24	NNW	1	NNW	1	C	0	C	0	C	0	C	0	N	1	NNW	1	NNW	1	NNW	1	C	0	C	0
25	NE	2	NE	2	ENE	3	ENE	2	ENE	1	ENE	1	ENE	1	ENE	1	ENE	1	ENE	1	ESE	1	ENE	1
26	ENE	1	ENE	1	,,	1	,,	1	C	0	,,	1	,,	1	,,	1	N	2	NNW	3	NNW	3	NNW	3
27	NNW	3	NNW	3	NNW	3	N	1	N	1	N	1	N	1	N	1	,,	1	N	1	N	1	N	1
28	C	0	C	0	N	1	C	0	C	0	C	0	C	0	C	0	,,	1	,,	1	NNW	1	NNW	2
Mean -		2·6		2·5		2·4		2·1		2·0		1·9		2·0		1·9		1·8		1·9		2·1		2·3

in metres per second.

January 1883.

1		2		3		4		5		6		7		8		9		10		11		Midnight.		Mean Velocity.
D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
NNW	2	NNW	1	C	0	NNW	1	NNW	1	C	0	C	0	C	0	C	0	C	0	NNW	2	NNW	2	1·0
,,	1	,,	1	NNW	1	,,	1	,,	1	NNW	1	NNW	1	,,	0	,,	0	,,	0	C	0	C	0	1·5
C	0	C	0	C	0	C	0	C	0	C	0	C	0	,,	0	,,	0	,,	0	,,	0	,,	0	0·0
ESE	2	ESE	3	ESE	2	ESE	3	ESE	2	ESE	2	ESE	2	ESE	2	ESE	3	ESE	3	ESE	3	ESE	3	1·9
,,	3	,,	4	,,	4	,,	3	,,	2	,,	2	,,	2	C	0	,,	1	,,	1	,,	1	C	0	2·2
,,	3	,,	4	,,	3	,,	3	,,	4	,,	3	,,	3	ESE	3	,,	3	,,	3	,,	4	ESE	3	2·1
,,	2	,,	2	,,	2	,,	3	,,	3	,,	2	,,	3	,,	4	,,	3	,,	3	,,	4	,,	3	2·5
C	0	C	0	NNW	1	NNW	1	NNW	2	NNW	1	NNW	1	NNW	2	NNW	2	NNW	3	NNW	3	NNW	4	1·2
NNW	1	,,	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	1·7
C	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	0·0
,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	0·1
ESE	1	ESE	1	ESE	1	ESE	2	ESE	2	ESE	1	ESE	1	ESE	1	ESE	2	ESE	2	ESE	3	ESE	2	0·8
,,	1	,,	1	C	0	,,	1	,,	1	E	1	,,	1	,,	1	,,	1	C	0	C	0	C	0	1·0
C	0	C	0	,,	0	C	0	C	0	C	0	C	0	C	0	C	0	,,	0	NNE	1	NNE	1	0·2
NNW	10	NNW	8	NNW	9	NNW	6	NNW	4	NNW	3	NNW	2	NNW	3	NNW	2	NNW	3	NNW	2	NNW	2	5·5
C	0	C	0	NW	1	NW	1	NW	1	NW	1	WNW	1	WNW	2	WNW	2	WNW	2	WNW	1	WNW	1	1·2
NNW	1	NNW	1	NNW	2	NNW	1	NNW	1	NNW	1	NNW	1	NNW	1	NNW	1	NNW	1	NNW	1	NNW	1	1·2
SE	4	SSE	5	SSE	4	SSE	4	SSE	5	SSE	5	SSE	5	SSE	5	SSE	5	SSE	3	SSE	3	SSE	3	2·7
NNW	6	NNW	8	NNW	8	NNW	7	NNW	5	NNW	5	NNW	3	NNW	4	NW	3	NW	4	NW	1	NW	3	3·1
,,	1	,,	2	,,	1	,,	1	C	0	,,	1		0	C	0	C	0	C	0	C	0	C	0	1·5
NW	1	NW	2	,,	3	,,	3	NNW	2	,,	1	NNW	1	NNW	2	NNW	2	NNW	1	NNW	1	NNW	1	1·0
C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	0·0
NNW	1	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	SE	1	ESE	1	,,	0	0·7
ESE	4	ESE	5	ESE	5	ESE	4	ESE	4	ESE	3	ESE	3	ESE	2	ESE	2	ESE	2	,,	1	,,	0	2·3
N	1	NNW	1	NNW	1	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	,,	0	0·7
C	0	C	0	C	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	E	1	E	1	ENE	2	0·2
,,	0	,,	0	,,	0	N	1	NNW	1	NNW	4	NNW	4	NNW	3	NNW	4	NNW	4	NNW	4	NNW	4	1·7
NNW	2	NNW	1	,,	0	C	0	C	0	,,	1	,,	1	C	0	C	0	C	0	C	0	,,	1	1·7
,,	3	,,	1	NNW	1	NNW	1	NNW	1	C	0	C	0	N	1	N	1	N	1	N	2	N	3	2·5
C	0	C	0	C	0	,,	1	C	0	NNW	1	NNW	1	NNW	1	NNW	1	C	0	NNW	1	NNW	1	0·3
NNW	6	NNW	6	NNW	5	,,	4	NNW	3	,,	3	,,	2	,,	2	,,	2	NNW	3	,,	2	,,	2	3·5
1·8		1·8		1·7		1·7		1·5		1·4		1·2		1·3		1·3		1·3		1·4		1·3		1·4

λ = −115° 43′ 50″ = −7h. 42m. 55s.

February 1883.

1		2		3		4		5		6		7		8		9		10		11		Midnight.		Mean Velocity.
D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
ESE	2	ESE	2	ESE	3	ESE	3	SE	3	SE	4	SE	4	SE	3	SE	4	SE	4	SE	1	SE	1	1·7
NNW	1	C	0	NNW	1	C	0	C	0	C	0	C	0	SSW	1	SSW	1	SW	1	SW	2	W	2	0·7
,,	1	NNW	2	,,	1	,,	0	,,	0	,,	0	,,	0	C	0	C	0	C	0	SSW	1	SSW	1	2·4
,,	2	,,	7	,,	10	N	9	NNW	10	NNW	12	NNW	7	NNW	9	NNW	14	NNW	13	NNW	14	NNW	11	5·2
NNW	8	,,	8	,,	9	NNW	8	,,	8	,,	11	,,	10	,,	7	,,	6	,,	3	,,	5	,,	4	8·5
SSW	1	SSE	1	SSE	2	SSE	1	C	0	C	0	C	0	C	0	WNW	1	WNW	4	WNW	4	WNW	5	1·2
N	4	NNW	2	N	4	N	4	N	3	NNW	2	NNW	3	NNW	2	C	0	C	0	NNW	1	NNW	1	4·0
ESE	3	ESE	3	ESE	2	ESE	2	ESE	1	,,	1	,,	3	,,	2	NNW	4	NNW	9	,,	8	,,	8	2·1
N	1	NNE	1	NNE	1	N	3	N	6	N	6	N	6	N	5	N	4	N	2	N	1	N	1	3·1
ESE	3	ESE	3	ESE	3	ESE	3	ESE	2	ESE	1	C	0	NNW	1	NNW	2	NNW	3	NNW	3	NNW	3	1·4
NNW	4	NNW	6	NNW	6	NNW	4	NNW	6	NNW	5	NNW	3	,,	3	,,	3	NW	3	,,	3	,,	4	4·5
,,	6	,,	4	,,	4	,,	4	,,	3	,,	3	,,	3	,,	4	,,	4	NNW	3	,,	1	,,	1	3·5
ENE	2	ENE	2	ENE	2	ENE	2	E	2	SE	2	SE	2	SE	2	SE	2	SE	2	SE	2	ESE	1	1·0
C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	1·0
NNW	1	NNW	2	NNW	1	NNW	1	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	0·3
W	1	WNW	5	WNW	5	WNW	5	WNW	5	WNW	5	WNW	4	WNW	6	WNW	6	WNW	4	WNW	4	WNW	4	2·6
WNW	4	,,	4	,,	4	NNW	5	N	5	N	4	NNW	3	NNW	3	NNW	2	NNW	1	NNW	1	NNW	1	4·0
,,	1	,,	1	,,	3	WNW	3	WNW	3	WNW	3	WNW	2	WNW	1	WNW	2	WNW	3	WNW	3	WNW	2	1·4
,,	2	,,	2	,,	2	,,	1	,,	1	,,	1	,,	1	,,	2	,,	3	,,	1	,,	1	,,	1	1·9
,,	1	W	1	W	1	W	1	C	0	C	0	C	0	C	0	C	0	NNW	1	NNW	1	NNW	1	1·2
ESE	4	SE	4	ESE	3	SE	4	SE	6	SE	5	SSE	5	SE	4	ESE	3	ESE	3	ESE	2	ESE	3	3·4
NNW	6	NNW	7	NNW	6	NNW	6	NNW	5	NNW	5	NNW	5	NNW	4	NNW	5	NNW	6	NNW	5	NNW	4	3·7
NW	2	,,	2	,,	2	,,	2	,,	1	C	0	C	0	C	0	C	0	,,	1	,,	1	C	0	1·8
C	0	,,	1	,,	1	,,	1	,,	1	NNW	1	NNW	1	NNW	1	,,	0	C	0	C	0	NE	1	0·6
,,	0	C	0	ENE	1	ENE	1	C	0	C	0	C	0	NE	1	NE	1	,,	0	ENE	1	ENE	1	1·0
NNW	4	NNW	5	NNW	5	NNW	7	NNW	6	NNW	6	NNW	6	NNW	5	NNW	5	NNW	4	NNW	3	NNW	3	3·2
C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	0·7
NNW	2	NNW	4	NNW	3	NNW	3	NNW	3	NNW	3	NNW	2	NNW	2	NNW	1	,,	0	,,	0	,,	0	1·2
2·4		2·8		3·0		3·0		2·9		2·9		2·5		2·4		2·6		2·5		2·4		2·3		2·4

March 1883. Direction and Velocity

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	C	0	C	0	C	0	C	0	ESE	1	ESE	1	ESE	1	ESE	2	ESE	2	ENE	3	ENE	4	ENE	4
2	,,	0	NNW	1	NNW	1	,,	0	C	0	C	0	NNW	1	C	0	C	0	NNW	1	N	3	NNW	3
3	NNW	1	,,	1	,,	1	NNW	1	NNW	1	NNW	1	,,	1	NNW	1	NNW	1	,,	1	,,	1	,,	1
4	ENE	1	ENE	1	ENE	1	ENE	1	E	1	ESE	2	ESE	1	ESE	3	ESE	2	ESE	3	ESE	4	ESE	4
5	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0
6	E	2	E	4	ESE	4	ESE	4	ESE	5	ESE	6	SE	5	ESE	3	ESE	4	SE	6	SE	6	SE	6
7	ESE	1	C	0	C	0	ENE	1	ENE	1	C	0	C	0	C	0	C	0	ESE	1	ESE	1	ESE	2
8	NNE	1	NNE	1	NNE	1	NNE	3	NNE	4	NNE	4	NNW	5	NNW	3	NNW	3	NNW	3	NNW	4	NNW	5
9	ESE	1	ESE	2	ESE	2	ESE	2	ESE	4	ESE	3	ESE	2	ESE	1	ESE	1	ESE	1	ESE	2	ESE	2
10	,,	5	,,	4	,,	5	,,	6	,,	6	SE	6	SE	7	SE	6	SE	7	,,	7	,,	6	SE	7
11	,,	1	N	1	N	3	NNW	2	NNW	4	NNW	5	NNW	4	NNW	6	NNW	6	NNW	6	NNW	6	NNW	6
12	,,	2	ESE	4	ESE	4	ESE	6	ESE	5	ESE	3	ESE	4	ESE	3	ESE	4	SE	4	SE	4	SE	4
13	NNW	3	NNW	5	NW	7	NW	9	NW	7	NNW	7	NW	5	NW	5	WNW	5	WNW	4	WNW	4	NNW	6
14	,,	2	,,	2	NNW	1	WNW	1	WNW	1	C	0	C	0	C	0	C	0	C	0	C	0	ESE	1
15	ESE	1	C	0	C	0	C	0	ENE	1	NNE	1	N	1	NNW	2	NNW	2	NNW	3	NNW	3	NW	3
16	C	0	,,	0	,,	0	,,	0	C	0	NNW	3	NNW	3	,,	4	,,	4	N	4	,,	4	N	5
17	,,	0	N	1	,,	0	N	1	N	1	N	1	,,	1	,,	2	,,	3	NNW	4	,,	2	NNW	4
18	WNW	1	C	0	NNW	1	NNW	1	NNW	1	C	0	C	0	C	0	C	0	C	0	C	0	C	0
19	E	3	ESE	4	ESE	4	ESE	4	ESE	5	SE	4	SE	6	SE	7	SE	6	ESE	5	SE	6	SE	6
20	C	0	,,	1	,,	1	C	0	C	0	C	0	C	0	NNW	1	NNW	2	NNW	3	NNW	3	NNW	3
21	NNW	1	C	0	NNW	1	NNW	1	NNW	1	NNW	1	NNW	1	C	0	,,	1	,,	1	,,	2	,,	1
22	C	0	,,	0	C	0	C	0	C	0	C	0	C	0	,,	0	,,	1	,,	2	,,	2	,,	4
23	NNW	2	NNW	2	NNW	2	NNW	3	NNW	3	NNW	3	N	2	NNW	2	N	2	,,	3	,,	3	,,	3
24	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0
25	,,	0	,,	0	,,	0	ESE	2	ESE	1	ESE	1	ESE	2	ESE	2	ESE	2	ESE	3	ESE	3	ESE	2
26	ESE	2	ESE	2	ESE	3	,,	2	,,	2	,,	3	,,	2	,,	2	,,	4	,,	4	,,	4	,,	4
27	E	2	E	2	,,	2	,,	3	,,	3	,,	2	,,	2	,,	2	,,	2	,,	2	,,	2	,,	3
28	ESE	2	ESE	2	,,	1	,,	2	,,	2	,,	2	,,	2	,,	2	,,	2	,,	1	,,	2	,,	1
29	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	NE	1
30	ESE	2	ESE	1	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	ESE	1	ESE	2	ESE	1
31	C	0	C	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	C	0	C	0	C	0
Mean -	1·2		1·3		1·5		1·8		1·9		1·9		1·9		1·9		2·1		2·5		2·5		3·0	

April 1883. $\varphi = +62° 38' 52''$.

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	C	0	C	0	C	0	C	0	C	0	ESE	1	C	0	C	0	ESE	1	ESE	2	ESE	2	ESE	1
2	ESE	2	ESE	1	ESE	1	ESE	1	ESE	1	,,	1	ESE	1	ESE	1	,,	1	,,	2	,,	3	,,	2
3	NNW	1	NNW	4	NNW	6	NNW	5	NNW	5	NNW	5	NNW	7	NNW	7	NNW	8	NNW	6	NNW	7	NNW	6
4	,,	1	,,	1	C	0	C	0	C	0	C	0	C	0	C	0	,,	1	C	0	E	1	N	1
5	ESE	1	ESE	1	ESE	2	ESE	2	ESE	2	ESE	1	ESE	1	ESE	2	ESE	2	ESE	2	,,	3	E	3
6	N	1	N	1	N	1	C	0	NNE	1	NNE	1	NNE	1	C	0	C	0	NNW	1	NNW	1	NNW	1
7	ESE	3	ESE	2	ESE	2	ESE	1	C	0	C	0	C	0	,,	0	ESE	1	ESE	1	ESE	2	ESE	2
8	E	1	E	1	ENE	1	ENE	2	,,	0	,,	0	,,	0	,,	0	E	1	E	1	E	1	E	1
9	ESE	2	ESE	3	ESE	3	SE	4	SE	3	ESE	2	ESE	2	ESE	2	ESE	1	ESE	1	WNW	1	NW	1
10	NNW	1	E	2	E	2	E	1	E	1	E	1	,,	2	,,	3	,,	3	,,	4	ESE	4	ESE	5
11	SSE	3	SSE	3	ESE	4	ESE	5	ESE	5	ESE	4	ESE	4	,,	3	,,	3	,,	3	,,	4	SSE	5
12	NNE	1	NNE	2	NNE	1	N	1	N	1	N	2	N	3	NNW	3	NNW	3	NNW	4	NNW	5	NNW	5
13	,,	1	,,	1	,,	1	NNE	1	NNE	1	NNE	1	NNE	1	NNE	1	NNE	2	NNE	2	ENE	2	ENE	2
14	ENE	1	ENE	1	ENE	2	ENE	1	ENE	1	ENE	2	ENE	2	ENE	1	ESE	1	ESE	2	ESE	2	SSE	3
15	C	0	ESE	1	E	1	E	1	E	1	E	2	E	2	E	1	ENE	1	ENE	2	ENE	2	ENE	1
16	,,	0	NNE	1	NNE	1	NNE	1	NNW	1	NNW	2	NNW	2	NNW	2	NNW	2	NNW	2	NNW	3	NNW	3
17	,,	0	C	0	C	0	,,	1	C	0	NNE	1	NNE	1	NNE	1	N	2	,,	2	,,	2	,,	2
18	E	2	E	2	E	1	E	1	,,	0	C	0	E	1	E	1	E	2	ESE	2	ESE	3	ESE	3
19	ESE	2	ESE	2	ESE	3	ESE	4	ESE	3	ESE	3	ESE	4	ESE	5	ESE	5	,	5	,,	5	,,	5
20	,,	4	,,	3	,,	3	,,	3	,,	3	,,	3	,,	3	,,	3	,,	3	SE	4	,,	4	,,	2
21	,,	3	,,	2	,,	2	,,	2	,,	3	,,	3	,,	3	,,	2	,,	3	ESE	3	,,	3	,,	4
22	SSE	2	SSW	2	W	2	NW	3	NW	4	NW	4	NW	5	NW	7	NNW	8	NNW	7	NNW	7	NNW	7
23	NNW	3	NNW	3	NNW	3	NNW	2	NNW	2	NNW	1	NNW	1	NNW	1	,,	1	,,	1	ENE	1	ENE	3
24	ESE	4	ESE	4	ESE	3	ESE	4	ESE	3	ESE	4	ESE	3	ESE	4	ESE	4	ESE	4	ESE	4	ESE	4
25	,,	2	,,	2	,,	1	C	0	C	0	C	0	,,	1	,,	1	,,	2	,,	2	,,	3	,,	3
26	C	0	ENE	1	NNE	2	NNE	2	NNE	2	NNW	2	NNW	3	NNW	3	NNW	4	NNW	4	NNW	3	NNW	3
27	NNE	1	N	1	N	1	N	1	C	0	C	0	ENE	2	ENE	1	ESE	2	ESE	2	ESE	2	ESE	3
28	ESE	2	ESE	3	ESE	3	ESE	4	ESE	5	SE	4	SE	4	SE	5	,,	5	SE	5	SE	6	SE	6
29	,,	2	,,	2	,,	3	,,	3	,,	3	ESE	5	ESE	4	ESE	4	SE	4	,,	5	,,	4	,,	5
30	,,	3	,,	4	,,	3	,,	4	,,	4	,,	4	,,	4	SE	5	,,	4	,,	5	,,	4	,,	4
Mean -	1·6		1·9		1·9		2·0		1·8		2·0		2·2		2·3		2·3		2·9		3·1		3·2	

in metres per second.

March 1883.

1		2		3		4		5		6		7		8		9		10		11		Midnight.		Mean Velocity.
D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
ESE	3	ENE	3	ENE	3	ENE	3	ENE	3	ENE	1	ENE	1	C	0	C	0	C	0	NNW	1	NNW	1	1·5
NNW	5	NNW	5	NNW	3	NNW	3	NNW	2	NNW	3	NNW	2	NNW	2	NNW	1	NNW	1	,,	2	,,	2	1·7
,,	2	,,	2	,,	1	,,	1	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	0·7
ESE	4	ESE	4	ESE	3	ESE	2	ESE	3	ESE	2	ESE	1	,,	0	,,	0	,,	0	,,	0	,,	0	1·8
C	0	C	0	C	0	C	0	C	0	C	0	C	0	,,	0	E	1	E	1	E	2	E	2	0·2
SE	5	SE	5	SE	6	SE	5	ESE	5	ESE	4	ESE	3	ESE	3	ESE	3	ESE	1	ESE	2	ESE	1	4·1
ESE	3	ESE	3	ESE	4	ESE	4	,,	4	SE	5	,,	3	,,	2	,,	2	,,	2	C	0	,,	1	1·7
NNW	4	NNW	4	NNW	3	NNW	3	NNW	1	C	0	C	0	C	0	C	0	C	0	,,	0	C	0	2·1
ESE	2	SE	2	SSE	3	SSE	4	SSE	1	ESE	1	ESE	2	SE	2	ESE	3	ESE	4	ESE	4	ESE	4	2·3
SE	8	,,	6	SE	6	SE	5	ESE	6	,,	6	,,	5	ESE	5	,,	5	,,	3	,,	2	,,	1	5·4
NNW	5	NNW	5	NNW	4	NNW	3	NNE	2	NNE	2	NNE	1	NNE	1	NNE	1	E	2	E	3	E	2	3·4
ESE	3	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	C	0	ESE	1	C	0	C	0	NNW	3	2·7
NNW	5	NNW	7	NNW	8	NNW	9	NNW	9	NNW	9	NNW	7	NNW	7	NNW	7	NNW	6	NNW	5	,,	3	6·2
SE	3	ESE	3	ESE	3	ESE	4	ESE	4	ESE	4	ESE	5	ESE	3	ESE	2	ESE	3	ESE	3	ESE	1	1·9
NW	4	NW	4	NW	3	NW	3	NW	2	NW	1	C	0	C	0	NW	1	C	0	C	0	C	0	1·5
N	6	N	5	ENE	4	ENE	5	ENE	4	ENE	2	NE	3	NE	3	NE	2	NE	1	,,	0	NNE	1	2·6
NNW	4	,,	3	NNW	3	NNW	2	NNW	2	NNW	2	NNW	1	C	0	NNW	1	C	0	NNW	1	NNW	2	1·7
C	0	NE	1	ENE	2	ENE	2	ENE	1	ESE	1	ESE	1	ESE	1	ESE	2	ESE	3	ESE	3	ESE	2	1·0
SSE	6	SSE	6	SSE	6	SSE	5	SSE	5	SSE	2	C	0	SSE	1	SSE	2	SSE	3	SSE	2	SE	1	4·1
NNW	3	WNW	4	WNW	5	WNW	5	WNW	6	WNW	5	N	3	NNW	2	NNW	2	N	2	NNW	2	NNW	3	2·3
,,	1	C	0	ENE	1	ESE	1	E	1	E	1	ESE	1	ESE	1	ESE	1	ESE	1	ESE	1	ESE	1	0·9
,,	4	NNW	3	N	3	NNW	4	NNW	4	NNE	4	N	3	NNE	2	NNE	2	NNE	1	NNW	2	NNW	2	1·8
,,	3	N	3	NNW	2	,,	2	,,	2	N	1	C	0	C	0	C	0	C	0	C	0	C	0	1·8
ENE	1	ENE	1	ENE	2	ENE	1	ENE	1	ESE	1	ESE	1	ESE	1	,,	0	,,	0	,,	0	,,	0	0·4
ESE	3	ESE	4	ESE	4	ESE	4	ESE	3	,,	4	,,	3	,,	3	ESE	3	ESE	2	ESE	2	ESE	2	2·3
,,	5	,,	5	,,	5	,,	5	,,	4	,,	4	,,	3	E	3	E	2	E	2	E	3	E	2	3·2
,,	3	,,	2	,,	2	,,	2	,,	2	,,	2	,,	3	ESE	2	ESE	2	ESE	2	ESE	2	ESE	1	2·2
C	0	C	0	C	0	C	0	C	0	C	0	,,	1	NNE	1	C	0	NNE	1	ENE	1	ENE	1	1·1
SE	1	ESE	1	ESE	1	ESE	1	ESE	1	ESE	1	,,	1	ESE	1	ESE	1	ESE	2	ESE	2	ESE	2	0·7
ESE	1	C	0	,,	2	,,	2	,,	2	,,	1	,,	1	C	0	C	0	,,	1	,,	1	C	0	0·7
C	0	,,	0	C	0	C	0	C	0	C	0	C	0	ESE	1	ESE	1	,,	1	C	0	ESE	1	0·2
	3·1		3·0		2·8		2·9		2·6		2·3		1·8		1·5		1·5		1·5		1·5		1·3	2·1

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s.

April 1883.

1		2		3		4		5		6		7		8		9		10		11		Midnight.		Mean Velocity.
D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
ESE	2	ESE	2	ESE	3	ESE	3	ESE	2	ESE	2	ESE	3	ESE	3	ESE	3	ESE	2	ESE	2	ESE	2	1·5
,,	3	,,	4	,,	4	,,	3	,,	3	,,	3	,,	3	,,	2	,,	2	,,	2	,,	1	C	0	2·0
NNW	7	NNW	6	NNW	6	NNW	5	NNW	5	NNW	4	N	2	N	1	NNW	2	NNW	1	NNW	1	NNW	1	4·5
N	1	N	1	N	1	N	1	C	0	C	0	ESE	1	ESE	1	C	0	ESE	1	ESE	1	C	0	0·5
E	3	ESE	3	ESE	3	ESE	3	ESE	2	ESE	1	C	0	C	0	,,	0	C	0	NNE	1	,,	0	1·6
NNW	1	C	0	NNE	1	C	0	,,	1	,,	1	ENE	1	ENE	1	ENE	2	ESE	2	ESE	2	ESE	3	1·0
ESE	1	ESE	1	C	0	,,	0	NNE	1	NNE	1	NE	1	,,	2	,,	1	E	1	E	1	E	1	1·0
,,	1	,,	1	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	1	ESE	2	1·2
NW	1	WNW	1	WNW	1	C	0	C	0	C	0	C	0	C	0	C	0	NNW	1	C	0	NNW	1	1·2
ESE	6	ESE	7	ESE	6	ESE	6	ESE	5	SE	6	SSE	4	SSE	3	SSE	3	SSE	2	SSE	4	SSE	3	3·5
SE	5	SE	4	SE	3	SE	1	,,	2	ESE	2	ESE	1	ESE	1	C	0	C	0	C	0	NNE	1	2·7
NNW	4	NNW	4	NNW	4	NNW	3	NNW	3	N	3	N	3	N	2	N	1	,,	0	N	1	,,	1	2·5
ENE	1	ENE	2	ENE	2	ENE	2	ENE	2	ENE	1	ENE	2	ENE	3	ENE	3	ENE	3	ENE	2	ENE	2	1·7
SSE	2	SSE	2	SSE	1	SSE	1	C	0	SSE	1	SSE	1	SSE	1	ESE	1	ESE	2	ESE	1	ESE	1	1·4
E	1	NNW	1	NNW	1	ENE	2	NE	2	NE	2	NE	2	NE	1	NE	1	NE	2	NE	2	C	0	1·3
NNW	2	,,	2	,,	2	NNW	2	NNW	1	NNW	2	NNW	1	ENE	2	ENE	3	ENE	3	ENE	3	,,	0	1·8
,,	2	,,	1	C	0	C	0	NNE	1	NNE	2	NNE	1	,,	1	,,	1	C	0	,,	1	ENE	1	1·0
ESE	4	ESE	4	ESE	3	ESE	2	ESE	2	ESE	2	ESE	2	ESE	1	ESE	1	ESE	1	ESE	2	ESE	2	1·8
,,	4	,,	4	,,	5	,,	4	,,	4	,,	4	,,	3	,,	4	,,	4	,,	4	,,	3	,,	3	3·8
,,	2	,,	2	,,	3	SE	4	SE	5	,,	4	,,	4	,,	4	,,	3	,,	5	,,	4	,,	3	3·4
,,	4	,,	4	,,	4	ESE	3	ESE	3	,,	2	SE	1	SE	2	SE	2	SE	2	SSE	2	SSE	2	2·7
NNW	8	NNW	6	NNW	6	NNW	5	NNW	4	NNW	5	NNW	5	NNW	4	N	4	N	3	NNW	3	NNW	3	4·7
ESE	3	ESE	4	ESE	5	SE	5	ESE	5	ESE	4	ESE	4	ESE	3	ESE	3	ESE	4	ESE	4	ESE	4	2·9
,,	4	,,	5	,,	4	ESE	4	,,	4	,,	4	,,	4	,,	4	,,	4	,,	4	,,	4	,,	3	3·9
,,	3	,,	3	,,	4	,,	4	E	4	,,	3	,,	3	,,	3	,,	3	,,	2	,,	1	C	0	2·1
NNW	3	NNW	3	NNW	4	NNW	4	NNW	3	NNW	2	NNW	1	N	1	N	1	C	0	C	0	NNE	1	2·2
ESE	2	ESE	2	ESE	3	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	1·7
SE	4	SE	4	,,	4	SE	3	,,	3	,,	2	,,	2	,,	2	,,	3	,,	1	,,	1	,,	2	3·5
,,	5	,,	4	SE	3	,,	3	SE	3	SE	2	,,	2	,,	2	,,	2	,,	2	,,	3	,,	3	3·2
,,	4	,,	4	,,	4	,,	4	,,	4	,,	4	SE	2	SE	2	,,	2	,,	2	,,	2	,,	2	3·5
	3·1		3·0		3·1		2·7		2·6		2·4		2·1		2·0		2·0		1·9		1·8		1·6	2·3

May 1883. Direction and Velocity

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	ESE	1	ESE	2	ESE	3	ESE	2	ESE	3	ESE	3	ESE	4	ESE	4	ESE	3	ESE	5	ESE	5	ESE	5
2	E	4	E	2	NNW	2	NNW	4	NNW	6	NNW	7	NNW	6	NNW	6	NNW	6	NNW	6	NNW	6	NNW	5
3	NNW	7	NNW	6	,,	6	,,	5	,,	4	,,	4	,,	6	,,	6	,,	6	,,	6	,,	6	,,	6
4	C	0	C	0	C	0	C	0	C	0	ENE	1	ENE	1	ENE	1	ESE	1	ESE	2	ESE	2	ESE	3
5	ESE	1	ESE	1	ESE	1	ESE	2	ESE	2	ESE	3	ESE	3	ESE	3	SE	2	SE	4	SE	2	SE	2
6	,,	2	,,	2	,,	1	,,	1	C	0	,,	2	,,	1	,,	2	,,	2	SSE	2	SSE	3	SSE	3
7	,,	2	,,	1	,,	1	,,	2	ESE	2	,,	2	,,	3	,,	3	ESE	3	ESE	4	ESE	4	ESE	4
8	,,	3	,,	2	,,	1	,,	2	,,	2	,,	2	,,	3	,,	2	,,	2	,,	3	SSE	3	SSE	3
9	,,	2	,,	2	,,	2	,,	1	,,	2	,,	2	SE	5	SE	6	SE	7	SE	7	SE	7	SE	7
10	SE	3	,,	4	,,	5	,,	5	,,	4	SE	6	,,	6	,,	6	,,	5	SSE	6	SSE	5	SSE	5
11	ESE	1	,,	2	,,	1	,,	1	,,	2	ESE	3	ESE	4	,,	5	SSE	4	,,	4	,,	4	SE	4
12	C	0	,,	1	,,	1	,,	1	C	0	SE	1	SE	3	,,	4	ESE	4	ESE	3	FSE	4	ESE	4
13	ESE	1	,,	2	,,	2	,,	2	ESE	2	ESE	3	ESE	3	ESE	3	,,	3	,,	3	SE	2	SE	3
14	C	0	C	0	C	0	C	0	C	0	,,	1	,,	2	,,	3	,,	3	,,	2	ESE	2	ESE	2
15	ESE	2	ESE	2	ESE	3	ESE	3	ESE	4	,,	4	,,	4	,,	4	,,	4	,,	5	,,	5	,,	5
16	,,	2	,,	2	,,	3	,,	4	,,	2	E	2	E	2	,,	3	,,	3	,,	3	,,	3	,,	3
17	ENE	3	ENE	2	NNE	2	NNE	1	C	0	NNE	1	C	0	C	0	C	0	,,	1	,,	2	,,	1
18	ESE	1	C	0	C	0	C	0	,,	0	C	0	ESE	1	ESE	1	ESE	2	,,	2	,,	2	,,	3
19	E	4	E	4	E	4	E	4	E	4	E	4	,,	3	,,	3	,,	3	,,	3	E	5	,,	4
20	SSE	2	SSE	3	S	2	SSE	2	SSE	2	SSE	2	SE	2	SE	2	,,	3	ESE	2	E	3	ESE	3
21	NE	1	C	0	C	0	C	0	NE	1	NNE	1	NNE	1	NNW	1	NNW	2	N	1	N	1	N	1
22	NNW	2	NNW	1	NNW	1	NNW	2	N	3	NNW	2	NNW	2	,,	2	N	2	NNW	2	NNW	3	,,	2
23	,,	2	,,	3	,,	2	,,	3	NNW	3	,,	3	,,	3	,,	3	NNW	3	,,	3	,,	3	NNW	3
24	NNE		NNE	1	N	1	N	1	N	1	N	1	N	1	N	2	N	1	,,	2	,,	2	,,	2
25	E		ESE	2	ESE	2	ESE	2	ESE	2	ESE	1	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2
26	ESE	2	,,	1	,,	1	C	0	C	0	C	0	,,	1	,,	2	,,	1	SE	2	SSE	1	SSE	1
27	,,	2	,,	2	,,	1	ESE	1	ESE	1	ESE	1	SSE	1	WSW	2	WSW	1	SSW	1	,,	1	,,	2
28	ENE	2	ENE	1	ENE	1	ENE	1	C	0	C	0	ENE	1	ESE	1	SSE	1	SSE	1	SSW	1	WNW	1
29	SSW	1	SW	1	SSW	1	C	0	,,	0	,,	0	SSW	1	C	0	WNW	1	NW	1	NW	1	W	1
30	NW	1	NNW	1	WNW	1	NNW	1	N	2	NNW	2	NNW	4	NNW	4	NNW	6	NNW	8	NNW	7	NNW	6
31	N	3	N	2	N	2	N	2	,,	2	N	2	N	2	N	2	,,	2	WNW	2	WNW	2	SSE	1
Mean		2·0		1·8		1·7		1·8		1·8		2·1		2·6		2·8		2·8		3·2		3·2		3·1

June 1883. $\varphi = +62^{\circ}\ 38'\ 52''$.

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	ESE	2	ESE	3	ESE	2	E	3	E	3	E	3	E	4	E	4	E	5	ESE	5	ESE	5	E	5
2	E	2	E	2	E	3	ENE	1	ENE	1	,,	2	,,	2	,,	2	ENE	2	E	2	E	4	,,	4
3	NNW	1	NNE	2	NNE	1	C	0	NNW	1	NE	1	C	0	,,	1	ESE	2	SSE	1	ENE	1	ESE	2
4	ESE	4	ESE	2	ESE	2	ENE	1	C	0	ENE	1	E	1	,,	1	E	2	E	2	E	3	E	4
5	NNW	3	NNW	3	NNW	4	NNW	2	NNW	3	NNW	4	NNW	5	NNW	4	NNW	4	NNW	5	NNW	4	NNW	4
6	N	5	N	5	N	5	N	5	N	5	N	5	N	6	N	6	N	6	N	5	N	5	N	5
7	ENE	2	ENE	1	ENE	1	ENE	1	E	1	E	2	E	1	ESE	2	ESE	2	E	3	E	3	E	3
8	,,	3	E	3	E	3	E	3	,,	3	,,	2	ESE	3	,,	4	,,	4	ESE	3	ESE	3	ESE	3
9	C	0	N	1	C	0	NNW	1	NNW	1	NNW	2	NNW	2	NNW	2	NNW	1	NNW	1	WNW	1	WNW	1
10	SSW	3	SSW	3	SSW	1	,,	1	,,	2	WNW	1	,,	2	,,	4	N	3	,,	4	NNW	4	NNW	5
11	NNW	4	NNW	4	WNW	3	,,	3	,,	3	NW	3	NW	3	WNW	3	NNW	3	,,	3	,,	2	,,	1
12	NE	1	NE	2	ENE	3	ENE	3	ENE	3	ENE	3	ENE	3	ESE	3	SSE	2	ENE	2	SSW	2	S	2
13	SSW	3	SSW	3	SSW	4	SSW	4	SSW	2	SSW	3	S	4	SW	5	WNW	1	SSW	1	E	1	ENE	1
14	ENE	2	ENE	4	ENE	4	E	4	E	4	ESE	4	ESE	3	ESE	3	ESE	4	ESE	3	SE	3	SE	3
15	E	1	E	2	E	1	,,	2	,,	2	ENE	2	ENE	3	,,	3	,,	2	,,	2	,,	2	SSE	3
16	ESE	2	ESE	3	ESE	4	ESE	4	ESE	3	ESE	4	ESE	3	SE	3	,,	3	,,	2	E	2	E	2
17	SSW	1	SSW	1	C	0	SSW	1	SSW	3	SSW	2	SSW	1	WSW	2	NNW	3	NNW	3	NNW	4	NNW	3
18	C	0	C	0	,,	0	C	0	C	0	NNE	1	NNE	1	NNE	2	NNE	2	NNE	1	,,	1	,,	1
19	NNW	2	NNW	2	NNE	2	NNE	3	NNE	2	,,	2	,,	2	N	2	,,	3	N	3	NNE	3	,,	2
20	NNE	2	NE	3	NE	2	NE	2	NE	1	NE	1	NE	1	NE	2	NE	1	SE	1	ENE	1	E	1
21	ESE	4	ESE	4	ESE	6	ESE	6	ESE	6	ESE	6	ESE	5	ESE	4	ESE	4	ESE	5	E	4	,,	5
22	SSE	9	SSE	9	SSE	9	SSE	9	SSE	7	SSE	6	SSE	5	SSE	4	SE	4	SE	5	SSE	6	S	7
23	ESE	3	ESE	2	ESE	3	ESE	2	ESE	2	ESE	3	ESE	3	ESE	3	E	3	E	4	ENE	5	ENE	5
24	E	2	E	2	E	3	E	3	E	3	E	3	,,	2	,,	3	ESE	4	ESE	3	ESE	3	ESE	4
25	C	0	SW	1	SSE	1	,,	2	,,	3	ESE	3	E	3	,,	3	ENE	3	ENE	4	ENE	4	ENE	4
26	ESE	1	ENE	1	ESE	2	C	0	C	0	C	0	C	0	C	0	WNW	1	WNW	1	NW	2	NW	1
27	NNE	2	NNE	2	NNE	3	NE	3	NE	4	ENE	3	ENE	4	ENE	4	NNE	4	NNE	4	ENE	4	NNE	4
28	ENE	2	ENE	3	ENE	2	ENE	3	ENE	3	,,	2	ESE	2	ESE	2	SSW	1	S	2	SSE	2	SSE	2
29	ESE	3	ESE	4	ESE	4	ESE	4	ESE	5	ESE	6	,,	5	,,	6	ESE	5	SSE	5	,,	3	ESE	2
30	NW	1	NNW	1	NW	1	NW	1	NNW	1	NNW	1	NNW	1	NNW	2	NNW	2	NW	2	WNW	2	WNW	3
Mean		2·3		2·6		2·6		2·6		2·6		2·7		2·7		3·0		2·9		2·9		3·0		3·1

in metres per second.

May 1883.

1		2		3		4		5		6		7		8		9		10		11		Midnight.		Mean Velocity.
D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
ESE	5	ESE	4	ESE	4	ESE	4	ESE	4	ESE	3	ESE	3	ESE	4	ESE	3	ESE	4	E	4	E	4	3·6
NNW	5	NNW	6	NNW	7	NNW	7	NNW	8	NNW	9	NNW	8	NNW	8	NNW	6	NNW	7	NNW	6	NNW	7	6·0
,,	6	,,	6	,,	6	,,	4	,,	4	,,	3	N	2	NNE	2	C	0	C	0	NNE	1	C	0	4·2
ESE	4	ESE	5	ESE	5	ESE	4	ESE	4	ESE	4	ESE	4	ESE	2	SE	2	SE	2	ESE	1	ESE	1	2·0
SSE	3	SSE	3	SSE	2	SSE	1	SSE	1	SSE	1	SSE	1	SSE	1	SSE	1	ESE	1	ENE	3	ENE	1	1·9
,,	3	,,	4	,,	3	,,	3	,,	2	,,	2	,,	2	ESE	2	ESE	1	,,	1	ESE	2	ESE	1	2·0
,,	4	,,	5	,,	4	,,	4	,,	4	SE	3	ESE	2	,,	2	E	2	,,	3	E	3	,,	3	2·9
,,	3	,,	3	,,	3	,,	2	,,	2	SSE	1	SSE	1	,,	1	ESE	1	,,	1	ESE	1	,,	1	2·0
SE	6	SE	6	SE	6	SE	5	SE	5	SE	5	SE	4	SE	4	,,	3	SE	3	,,	2	SE	3	4·2
SSE	4	SSE	4	SSE	4	SSE	3	ESE	3	ESE	3	ESE	2	ESE	2	,,	2	ESE	2	,,	2	ESE	1	3·8
SE	4	SE	4	SE	3	SE	3	SE	2	SE	3	SE	2	SE	1	,,	2	,,	1	,,	1	C	0	2·5
ESE	3	ESE	3	ESE	3	ESE	2	ESE	2	ESE	2	ESE	2	ESE	2	,,	2	,,	1	C	0	,,	0	2·0
SE	3	SE	3	,,	3	,,	3	,,	2	,,	2	,,	2	,,	1	,,	1	,,	1	ESE	2	ESE	1	2·2
ESE	2	ESE	4	,,	3	,,	3	,,	3	,,	2	,,	2	,,	2	,,	2	,,	2	,,	2	,,	2	2·7
,,	4	,,	4	,,	4	,,	4	,,	3	,,	3	,,	2	,,	2	,,	2	,,	2	,,	2	,,	2	3·3
,,	2	SE	3	,,	3	,,	3	,,	3	,,	2	,,	2	,,	2	,,	2	ENE	2	ENE	3	ENE	4	2 6
,,	1	ESE	2	,,	2	SE	2	SE	1	SSE	1	SSE	1	SSE	1	,,	1	ESE	2	ESE	1	ESE	1	1·2
,,	3	,,	2	,,	2	ESE	2	ESE	3	ESE	3	ESE	2	ESE	1	,,	1	,,	1	,,	2	E	4	1·6
SSW	5	SSW	4	,,	4	,,	4	E	4	E	4	,,	4	,,	3	,,	4	S	3	SSE	2	SSE	2	3·7
ESE	3	NNW	2	NNW	2	E	1	WNW	2	NW	1	NW	1	C	0	NW	1	C	0	C	0	C	0	1·7
WSW	2	SSW	2	NW	2	NNW	5	NNW	2	NNW	4	NNE	2	,,	0	NNE	1	,,	0	NNE	1	N	3	1·4
NNW	4	NNW	5	NNW	6	,,	6	,,	5	,,	4	NNW	4	NNW	3	NNW	3	NNW	4	NNW	3	NNW	3	3·1
,,	3	,,	4	N	4	,,	3	,,	3	,,	2	,,	2	,,	1	C	0	C	0	C	0	C	0	2·3
,,	2	,,	2	NNW	2	,,	1	,,	1	,,	1	C	0	C	0	,,	0	NE	1	E	2	E	3	1·3
ESE	2	ESE	2	ESE	2	ESE	2	SE	2	SE	1	,,	0	,,	0	,,	0	C	0	C	0	ESE	1	1·5
SSE	1	SSE	1	SSE	1	SSE	1	SSE	1	SSE	1	SSE	1	SSE	1	,,	0	ESE	2	ESE	3	,,	3	1·2
NNW	2	NNW	2	NNW	2	NNW	2	NNW	2	NNW	2	NNW	2	NNW	2	NNW	2	NNW	1	C	0	NNE	1	1·5
WNW	1	WNW	2	WNW	2	WNW	2	WNW	1	C	0	C	0	C	0	C	0	C	0	,,	0	WSW	1	0·8
W	1	,,	1	,,	1	,,	2	,,	1	WNW	1	WNW	1	WNW	1	WSW	1	WSW	1	NNW	1	NNW	1	0·9
N	7	N	6	N	6	N	6	N	6	N	6	NNE	5	N	5	NNW	4	N	3	NNE	3	NNE	3	4·3
ESE	2	ESE	3	E	3	E	3	ESE	4	ENE	4	ENE	4	E	5	E	4	E	3	ESE	2	ESE	2	2·6
	3·2		3·5		3·4		3·1		2·9		2·7		2·3		2·0		1·7		1·7		1·8		1·9	2·5

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s.

June 1883.

1		2		3		4		5		6		7		8		9		10		11		Midnight.		Mean Velocity.
D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
E	4	ESE	3	ESE	3	SSW	2	SSW	3	SSW	4	SSW	3	ESE	2	ESE	2	ESE	2	E	2	ESE	2	3·2
,,	3	C	0	N	1	N	1	NW	1	NNE	4	NNE	2	NNE	1	NNE	1	NNE	1	C	0	NE	1	1·8
ESE	2	ESE	2	ESE	3	ESE	1	ESE	1	E	2	E	3	E	3	E	4	E	4	E	4	E	4	1·9
E	3	W	1	E	2	E	1	E	1	C	0	C	0	C	0	NNW	1	NNW	5	NNW	3	NNW	2	1·7
NNW	4	NNW	3	NNW	4	NNW	3	NNW	3	NNW	5	N	4	NNW	4	,,	5	,,	5	N	5	N	5	4·0
N	5	N	3	N	4	N	3	N	3	NNE	3	NNE	2	NNE	2	NNE	3	NNE	2	NNE	2	NE	2	4·0
E	4	E	4	ESE	4	ESE	4	ESE	4	ESE	4	ESE	5	ESE	4	ESE	3	E	3	E	2	E	3	2·7
ESE	3	,,	4	E	3	E	4	,,	3	ENE	3	E	2	,,	1	C	0	C	0	C	0	C	0	2·5
WNW	1	WNW	1	C	0	C	0	C	0	C	0	C	0	SE	1	SSE	1	SSE	1	SW	1	SSW	4	1·0
N	5	N	5	N	5	N	5	N	4	N	4	N	3	N	2	N	1	NNW	3	NNW	5	NNW	4	3·3
NNW	1	NNW	2	NNW	1	NNW	2	NNW	1	NNW	1	C	0	C	0	C	0	C	0	NNE	1	NE	1	1·9
SSW	2	SSW	2	SSW	2	SW	1	SW	2	WNW	2	SE	1	ESE	2	ESE	2	SE	3	SSE	3	SSE	2	2·2
ENE	1	NE	2	NE	2	NNE	2	ESE	2	ESE	2	ESE	2	C	0	C	0	C	0	C	0	C	0	1·9
SE	2	ESE	2	SSE	2	SSE	2	SSE	1	C	0	,,	1	E	1	E	1	E	1	E	2	ESE	2	2·4
SSE	2	SSE	2	,,	1	C	0	NNW	1	,,	0	C	0	C	0	C	0	C	0	C	0	,,	1	1·3
ESE	3	ESE	3	ESE	3	ESE	3	ESE	3	ESE	3	WNW	2	NNW	1	SSW	1	SSW	3	SSW	3	SSW	2	2·7
NW	3	NNW	3	NNW	2	NNW	2	C	0	NNW	1	NNW	1	C	0	C	0	C	0	C	0	C	0	1·5
WNW	1	WNW	1	,,	1	,,	2	N	2	N	2	NNE	1	NNE	1	NNE	1	NNE	1	NNE	1	NNE	1	1·0
NNW	3	NNW	3	,,	3	,,	3	NNW	3	NNW	4	N	4	N	4	N	4	,,	2	,,	2	,,	2	2·7
,,	1	C	0	ESE	1	ESE	1	ESE	2	ESE	1	ESE	2	ESE	2	ESE	2	ESE	2	ESE	3	ESE	3	1·5
ESE	5	ESE	4	SSE	5	SSE	6	,,	5	,,	6	,,	6	,,	6	,,	5	SE	5	SSE	6	SSE	8	5·2
S	8	SE	7	ESE	5	ESE	4	,,	4	,,	4	NNE	3	NNE	2	NE	1	ESE	1	ESE	1	ESE	2	5·1
E	5	ESE	4	SSE	5	,,	2	E	3	E	3	E	3	E	2	E	2	ENE	3	E	2	E	2	3·0
,,	5	E	4	ENE	4	ENE	4	ENE	3	ENE	3	,,	3	,,	3	,,	3	E	1	,,	1	,,	1	2·9
,,	5	,,	4	ESE	4	ESE	4	ESE	3	ESE	4	ESE	4	,,	2	ENE	2	,,	2	ESE	2	ESE	2	2·9
WSW	1	WNW	2	ENE	2	ENE	4	SSW	1	SE	1	SE	2	ESE	2	,,	1	NNE	3	NNE	3	NNE	2	1·4
NNE	4	ENE	4	NNW	3	NE	3	NE	3	NNW	3	NE	2	NNE	3	NE	2	,,	1	,,	2	ENE	2	3·0
SSE	2	SSE	2	SSE	3	SSE	3	SSE	4	SSE	4	SSE	4	ESE	4	ESE	4	ESE	3	SSE	3	ESE	5	2·8
ESE	2	ENE	3	ESE	1	ENE	2	ENE	2	ENE	2	ENE	1	C	0	C	0	WNW	1	NW	1	NW	1	2·8
WNW	3	WNW	3	WNW	3	WNW	2	WNW	2	NW	2	NNW	2	N	3	N	3	NNW	3	NNE	3	ENE	2	2·0
	3·1		2·8		2·7		2·5		2·3		2·6		2·3		1·9		1·8		2·0		2·1		2·3	2·5

July 1883. Direction and Velocity

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	ENE	1	ENE	2	ENE	3	ENE	3	ENE	2	ENE	2	E	5	ENE	3	NE	3	E	2	SE	2	SSE	2
2	SW	5	SW	5	SW	5	SW	4	WSW	5	WSW	4	WSW	3	WNW	3	WNW	2	ESE	2	ESE	3	ESE	3
3	NNW	2	NNW	2	NNW	3	NNW	3	NNW	3	NNW	3	NNW	4	NW	2	,,	3	WNW	3	WNW	4	WNW	5
4	,,	7	,,	8	,,	6	WNW	6	,,	6	,,	6	,,	6	NNW	6	NNW	7	NNW	6	NNW	6	NNW	5
5	ESE	3	SSE	4	SSE	3	SE	3	SE	4	SE	4	SE	4	SE	5	ESE	3	ESE	3	ESE	4	ESE	4
6	S	3	S	3	,,	4	SSE	3	SSE	4	SSE	4	SSE	4	,,	4	SSE	3	SSE	4	SSE	4	SSE	3
7	WSW	1	NW	1	C	0	NNW	1	NNW	1	NNW	1	NNW	1	N	1	N	1	NNW	2	NNW	3	NNW	3
8	NNE	1	C	0	NNE	1	,,	2	N	2	NNE	2	NW	2	NNW	2	NNW	2	,,	3	,,	4	,,	4
9	WNW	1	WNW	1	WNW	1	WNW	1	WNW	1	WNW	2	WNW	1	WNW	1	WNW	1	NW	2	NW	2	NW	2
10	ESE	7	ESE	7	ESE	4	ESE	6	SE	5	SE	6	ESE	5	ESE	5	ESE	5	ESE	6	SSE	7	SSE	6
11	E	6	E	6	E	6	E	6	E	5	ESE	5	,,	5	,,	4	,,	5	E	5	ESE	5	E	5
12	ENE	1	NE	3	NE	4	ENE	3	ENE	3	ENE	3	NNE	2	NNE	2	ENE	3	NNE	3	NNE	3	NNE	3
13	NNE	2	NNE	1	NNE	2	NNE	3	NNE	2	NNE	2	,,	2	NE	2	,,	3	,,	2	ESE	2	E	2
14	NE	2	ENE	3	ENE	3	E	3	ESE	3	E	3	E	3	E	2	ESE	2	SE	2	SSE	2	SSE	2
15	S	2	S	1	C	0	C	0	C	0	C	0	SE	1	SE	1	,,	2	,,	2	ESE	2	,,	2
16	SSE	1	C	0	,,	0	WSW	1	,,	0	,,	0	SSW	1	SSE	1	SSE	2	ESE	2	,,	3	ESE	3
17	,,	2	SSE	2	SSE	1	ESE	2	ESE	2	ESE	3	ESE	3	ESE	3	ESE	3	,,	4	,,	4	,,	5
18	,,	1	SE	2	ESE	2	E	2	E	2	,,	3	,,	3	,,	3	,,	4	,,	4	,,	4	E	5
19	ESE	2	ENE	2	ENE	2	ENE	2	ESE	2	,,	3	,,	3	,,	2	,,	2	,,	2	,,	1	ESE	1
20	ENE	1	C	0	,,	2	,,	2	,,	2	,,	3	,,	4	,,	4	,,	4	E	3	E	4	,,	4
21	SSE	3	SSE	2	SSE	2	SSE	2	,,	2	,,	3	SSE	3	SSE	4	SSW	4	SSE	4	SSE	5	SSE	5
22	,,	3	,,	2	,,	3	S	2	SW	1	WSW	1	SW	2	SSW	4	S	4	,,	4	SSW	5	S	4
23	S	5	,,	3	,,	3	SSE	3	SSW	5	SSW	5	SSW	4	,,	4	SSE	4	SW	4	WSW	3	SSW	2
24	W	3	WNW	3	WNW	3	WNW	3	WNW	3	WNW	3	NW	3	NW	3	NW	3	NW	3	NNW	4	NNW	3
25	WNW	3	NNW	3	NNW	3	N	4	N	3	N	4	N	4	N	4	N	5	N	5	N	4	N	4
26	NNW	2	,,	2	,,	3	,,	2	,,	2	,,	1	C	0	C	0	C	0	NNW	1	NNW	1	NNW	1
27	C	0	C	0	C	0	C	0	C	0	C	0	,,	0	,,	0	,,	0	SSE	1	SE	2	ESE	2
28	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	C	0	C	0	C	0
29	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	,,	0	SSE	1	SSE	1	SSE	1	SSE	1
30	ESE	3	ESE	3	ESE	3	ESE	3	SE	3	ESE	3	E	2	ESE	3	ESE	3	SE	3	SE	5	SE	5
31	,,	3	,,	3	,,	4	,,	5	ESE	4	,,	5	ESE	4	,,	5	,,	5	ESE	5	ESE	5	ESE	5
Mean -		2·5		2·4		2·5		2·6		2·5		2·7		2·7		2·7		2·9		3·0		3·4		3·3

August 1883. $\varphi = +62° 38' 52''$.

Days.	1		2		3		4		5		6		7		8		9		10		11		Noon.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	ESE	3	ESE	3	ESE	3	ESE	3	ESE	3	ESE	3	ESE	3	ESE	3	ESE	4	ESE	5	ESE	5	ESE	5
2	S	2	,,	1	,,	1	,,	2	,,	2	,,	2	,,	2	,,	3	,,	3	,,	4	,,	4	E	5
3	NNW	1	ENE	2	ENE	2	E	3	E	2	E	2	,,	3	,,	2	,,	2	E	2	S	1	NNE	1
4	,,	5	NNW	4	WNW	3	WNW	3	WNW	4	WNW	4	WNW	4	WNW	5	WNW	5	WNW	5	WNW	5	WNW	5
5	WNW	1	N	2	NNE	3	NNE	1	NNE	1	ENE	1	NNE	1	NNE	1	NNE	1	E	1	ESE	1	ESE	1
6	SSE	4	SSE	4	SSE	4	SSE	3	SSE	3	ESE	2	ESE	3	SE	3	SE	3	ESE	3	,,	4	E	3
7	WNW	4	WNW	2	NW	3	N	4	N	4	N	4	NNW	4	NW	6	NNW	6	NNW	5	NW	4	NW	5
8	C	0	C	0	SSE	1	SSE	1	SE	2	SE	3	SE	3	SSE	4	SSW	1	C	0	ESE	1	C	0
9	WSW	2	WSW	2	SSW	2	SSW	1	C	0	SSW	1	SSW	2	SSW	2	S	3	SSE	3	SSE	3	SE	3
10	SSE	5	SSE	6	SSE	5	SSE	4	SSE	3	SSE	4	SE	3	SE	4	ESE	3	ESE	4	ESE	4	ESE	5
11	ESE	4	ESE	4	ESE	4	ESE	5	ESE	4	ESE	5	ESE	5	ESE	5	,,	4	,,	5	,,	5	,,	6
12	,,	3	,,	4	,,	4	,,	4	,,	5	,,	4	,,	3	E	3	E	5	E	5	E	5	E	5
13	,,	4	,,	2	,,	2	SE	3	SE	3	,,	2	,,	2	ESE	3	ESE	3	ESE	3	ESE	3	ESE	4
14	WNW	3	WNW	3	WNW	3	WNW	3	WNW	4	WNW	4	WNW	4	WNW	4	WNW	5	WNW	5	WNW	5	WNW	5
15	,,	5	,,	5	,,	5	,,	3	NW	4	,,	4	NW	5	NW	4	NW	4	NNW	3	NNW	4	NNW	4
16	NNE	1	NNE	1	NNE	2	NNE	2	NNE	2	NE	2	NE	1	NE	2	NE	2	NE	2	NE	1	NNE	2
17	N	1	N	2	N	2	N	3	NNW	2	NNW	1	NNW	2	NNW	2	NNW	2	NNW	1	NNW	1	NNW	1
18	SW	2	SW	3	SSW	2	SSW	2	SSE	3	SSE	3	SSE	4	SSE	4	SSE	4	SE	3	E	3	E	4
19	SSE	2	SSE	2	SSE	2	SSE	3	SSW	1	SSW	1	WSW	1	WSW	2	W	3	NW	3	NW	4	WNW	4
20	NNW	5	NNW	5	NNW	6	NNW	7	NNW	7	NNW	7	NNW	7	NNW	7	NNW	7	NNW	7	NNW	7	NNW	7
21	,,	3	WNW	1	WNW	1	WNW	1	C	0	WNW	1	W	1	SW	1	S	2	SSE	2	SE	2	SE	2
22	SSW	4	SSW	4	SSW	3	SSW	3	SSW	2	WSW	2	WSW	3	W	2	W	1	WNW	1	C	0	C	0
23	C	0	C	0	N	1	NNW	1	NNW	1	NNW	1	NNW	2	NNW	1	NNW	1	NNW	2	NNW	2	NNW	2
24	NNE	1	NNE	1	NNE	1	NNE	1	NNE	1	ESE	1	ESE	1	C	0	C	0	C	0	E	1	E	3
25	ESE	3	ESE	3	SE	1	S	2	S	2	SSW	2	WSW	3	W	1	SSW	1	,,	0	C	0	SSE	1
26	N	2	NNE	2	NE	1	NE	1	NNW	1	NNE	1	NNE	1	NNE	1	N	1	NNW	1	NNW	1	WNW	1
27	ESE	1	C	0	C	0	ESE	1	C	0	SSE	1	SSE	2	SSE	1	S	1	ESE	2	ESE	2	E	3
28	C	0	WNW	1	W	1	NNW	1	NNW	1	C	0	NNW	1	NNW	1	WNW	1	NW	1	NNW	2	NNW	2
29	E	2	E	2	ENE	2	ENE	3	ENE	3	ENE	2	E	3	ENE	3	ENE	3	ENE	2	ESE	2	ESE	2
30	ENE	2	ENE	2	,,	3	,,	3	,,	2	,,	2	ENE	3	,,	3	E	3	ESE	2	ENE	2	,,	1
31	,,	2	,,	2	NE	2	NE	2	NE	2	NNE	2	NNE	2	NNE	2	NNE	2	NNE	1	NNE	1	NNE	1
Mean -		2·5		2·4		2·4		2·5		2·4		2·4		2·7		2·7		2·8		2·7		2·7		3·0

Fort Rae.

in metres per second.

July 1883.

1		2		3		4		5		6		7		8		9		10		11		Midnight.		Mean Velocity.
D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
WSW	2	WSW	2	WSW	2	WSW	2	WSW	1	WSW	1	WSW	1	WSW	1	WSW	1	WSW	2	SSW	3	SW	5	2·2
ENE	3	E	3	E	2	E	2	E	2	ESE	1	NNE	3	NNE	4	SSE	1	,,	1	WSW	2	NW	2	2·9
NNW	6	WNW	7	WNW	5	NNW	5	NW	5	WNW	6	WNW	7	WNW	7	WNW	6	WNW	6	NNW	6	NNW	6	4·5
,,	6	NNW	5	NNW	5	,,	5	NNW	4	NNW	3	NNE	2	NNE	2	NNE	2	NE	1	NE	3	ESE	3	4·8
ESE	4	ESE	3	ESE	4	ESE	4	ESE	4	ESE	4	ESE	4	ESE	5	SSE	5	SSE	5	SSE	4	S	3	3·9
SSE	3	,,	4	SSE	4	SSW	5	SSW	5	SSW	3	N	4	NNE	3	ESE	2	ESE	1	NW	2	SW	1	3·3
NNW	3	NNW	4	NNE	3	NNE	3	NNW	3	NNW	3	NNW	1	NNW	2	C	0	C	0	NNW	1	NNE	1	1·7
,,	4	,,	3	NNW	3	NNW	3	,,	2	,,	2	,,	1	,,	1	,,	0	,,	0	C	0	C	0	1·8
NW	1	SSW	1	SSW	2	SSE	2	SSE	2	SSE	2	SSE	1	SSE	1	SSE	1	SSE	2	SSE	2	ESE	4	1·5
SSE	6	SSE	6	SSE	6	SE	5	,,	5	ESE	5	E	5	E	5	E	6	ENE	4	E	5	E	6	5·5
ENE	4	ENE	4	E	5	ESE	5	ESE	5	,,	5	ESE	4	,,	3	,,	2	NE	2	ENE	2	ENE	1	4·4
NNE	3	NNE	3	NNE	3	NNE	3	NNE	3	NNE	2	NNE	2	NNE	2	NNE	2	NNE	2	NNE	2	NNE	2	2·6
SE	1	WNW	2	WNW	2	WNW	1	WNW	1	WNW	1	WNW	1	C	0	C	0	C	0	,,	1	NE	2	1·5
SSE	2	SSE	1	,,	2	,,	2	,,	1	,,	1	,,	1	S	1	,,	0	,,	0	C	0	SSE	3	1·8
,,	2	,,	2	SSE	3	SSE	2	SSE	2	SSE	2	SSE	1	SSE	1	,,	0	,,	0	,,	0	,,	1	1·2
ESE	4	ESE	3	ESE	3	SE	4	SE	4	,,	3	ESE	3	ESE	4	SSE	4	S	4	SSE	3	,,	3	2·3
,,	5	,,	5	,,	5	ESE	4	ESE	4	ESE	3	,,	3	,,	3	ESE	2	ESE	3	,,	3	,,	2	3·2
,,	4	,,	4	,,	4	,,	4	,,	3	,,	3	,,	3	,,	2	,,	1	,,	1	ESE	2	ESE	1	2·8
,,	1	,,	2	,,	2	,,	2	E	2	,,	3	E	2	E	1	E	1	E	1	E	1	E	1	1·8
,,	4	,,	4	,,	4	,,	4	ESE	4	,,	3	ESE	3	ESE	3	ESE	3	SSE	3	SSE	3	SSE	3	3·1
SSE	6	SSE	7	SSE	7	SSE	5	SSE	6	SSE	6	SSE	5	SSE	4	SSE	3	,,	3	,,	2	,,	3	4·0
S	5	S	6	SSW	6	SSW	7	SSW	7	SSW	6	SSW	5	SSW	4	SSW	3	SW	3	,,	4	S	6	4·0
SW	2	SSW	2	NNW	3	WSW	3	NW	1	NW	3	NW	1	W	1	W	1	WSW	1	WSW	3	W	3	2·9
NW	3	NNW	4	,,	3	NNW	3	NNW	3	,,	4	,,	3	NW	3	NW	3	WNW	2	WNW	2	WNW	3	3·0
N	4	N	4	N	4	N	3	N	3	N	3	NNW	4	NNW	4	NNW	3	NNW	2	NNW	2	N	3	3·5
NNE	1	NNW	1	WNW	1	NW	2	NNW	2	NNE	2	NE	2	NNE	1	C	0	C	0	C	0	C	0	1·1
ESE	2	NE	3	NE	1	ESE	1	SE	4	SE	3	SE	3	SSE	3	SSE	3	SSW	1	W	1	WNW	1	1·3
N	1	N	1	N	1	N	1	N	1	N	1	N	1	C	0	C	0	C	0	C	0	C	0	0·3
SSE	1	SSE	2	SSE	2	SSE	1	E	1	E	1	ESE	1	ESE	2	ESE	2	ESE	1	ESE	1	ESE	2	0·9
SE	4	SE	3	SE	2	SE	3	SE	3	ESE	2	SE	1	SE	1	,,	2	,,	1	,,	1	,,	2	2·7
ESE	4	ESE	3	ESE	4	ESE	3	ESE	4	,,	3	ESE	3	ESE	4	,,	4	SSE	3	SE	3	,,	3	3·9
	3·3		3·4		3·3		3·2		3·1		2·9		2·6		2·5		2·0		1·8		2·1		2·5	2·7

λ = −115° 43′ 50″ = −7h. 42m. 55s.

August 1883.

1		2		3		4		5		6		7		8		9		10		11		Midnight.		Mean Velocity.
D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
ESE	5	ESE	4	ESE	5	ESE	4	ESE	4	E	2	E	3	ESE	3	ESE	3	ESE	3	ESE	3	ESE	2	3·5
E	5	,,	4	,,	3	E	3	E	3	ENE	3	,,	3	E	2	E	1	E	1	E	2	C	0	2·5
,,	2	E	1	N	1	N	2	N	2	N	2	NNW	2	NNW	2	C	0	C	0	WNW	1	NW	3	1·7
WNW	5	WNW	4	WNW	4	WNW	4	WNW	2	WNW	3	WNW	2	NW	1	,,	0	W	1	C	0	C	0	3·2
ESE	1	ESE	1	ESE	1	SE	1	SE	1	C	0	SSE	1	SE	1	SE	2	SSE	2	SSE	3	SSE	4	1·4
,,	3	,,	3	E	3	,,	2	C	0	,,	0	C	0	C	0	C	0	C	0	C	0	C	0	2·1
NW	5	NW	5	NNW	4	NNW	4	NNW	4	NNW	3	N	2	NNE	2	NNE	1	,,	0	,,	0	,,	0	3·4
C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	SE	1	S	1	SSW	1	SSW	2	0·9
SE	4	SE	5	S	5	S	5	S	6	S	6	SSE	5	SSE	5	SSE	6	SSE	6	SSE	5	SSE	3	3·5
ESE	5	ESE	5	ESE	5	ESE	4	ESE	4	ESE	4	ESE	4	ESE	3	ESE	3	ESE	2	ESE	4	ESE	4	4·0
,,	6	,,	6	,,	5	,,	4	,,	5	,,	4	,,	3	,,	2	,,	3	,,	3	,,	3	,,	4	4·3
E	4	E	5	,,	4	,,	4	,,	4	,,	4	,,	4	,,	3	,,	3	,,	4	,,	3	,,	4	4·0
ESE	3	ESE	3	,,	4	,,	3	SSW	3	W	3	SSE	1	WSW	3	WSW	2	WNW	3	WNW	3	WNW	3	2·8
WNW	5	WNW	5	WNW	6	WNW	6	WNW	6	WNW	6	WNW	6	WNW	6	WNW	6	,,	5	,,	5	,,	5	4·8
NNW	3	NNW	3	NNW	3	NNW	3	N	3	N	2	NNE	2	NNE	1	C	0	C	0	NNE	1	NNE	1	3·0
NNE	2	ESE	1	C	0	NNE	1	,,	1	NNW	2	N	2	N	3	N	2	N	1	N	1	N	1	1·5
C	0	C	0	SSW	1	SSW	1	SSW	1	SSW	2	SSW	3	SSW	2	SW	2	SW	2	SW	2	SW	2	1·6
ESE	3	ESE	4	ESE	4	ESE	4	E	4	E	3	ESE	2	SE	2	SSE	4	SSE	5	SSE	4	SSE	1	3·2
WNW	4	WNW	6	WNW	5	NW	5	NW	5	NW	6	NNW	6	NNW	6	NNW	5	NNW	5	NNW	6	NNW	5	3·8
NNW	7	NNW	8	NNW	8	NNW	9	NNW	8	NNW	7	N	6	N	6	,,	6	,,	5	,,	4	,,	3	6·5
ESE	2	E	3	E	3	E	2	ESE	3	SE	3	SE	3	SSE	4	SSE	5	SSE	4	SSW	3	SSW	4	2·3
WNW	1	NW	1	NW	1	NNW	1	C	0	C	0	C	0	C	0	C	0	C	0	C	0	C	0	1·2
NNW	3	NNW	3	NNW	3	,,	3	NNW	3	NNW	3	N	2	N	1	NNE	1	NNE	2	NNE	2	NNE	2	1·7
E	3	E	3	NNE	3	E	4	SE	4	SE	4	SE	5	SSE	5	SSE	5	SW	2	ESE	2	ESE	3	2·2
ESE	1	ENE	1	ENE	1	C	0	C	0	C	0	C	0	C	0	N	2	N	2	N	2	N	2	1·2
WNW	2	WNW	2	WNW	1	NNW	1	C	0	,,	0	NNE	1	NNE	1	NE	1	E	1	E	2	E	2	1·2
E	4	E	3	ESE	2	ESE	2	ESE	2	ESE	2	ESE	1	ESE	1	C	0	C	0	C	0	C	0	1·3
NNW	3	N	2	NNE	2	NNE	2	NNW	1	NNW	1	NNW	1	N	1	NNE	1	ENE	3	ENE	3	E	3	1·5
ESE	2	ESE	2	ESE	2	ESE	2	ESE	1	ESE	2	ESE	1	ENE	1	ENE	2	,,	3	,,	3	ENE	2	2·2
E	3	E	2	E	2	ENE	1	C	0	C	0	C	0	C	0	C	0	,,	1	C	0	,,	2	1·6
NNW	1	WNW	1	WNW	1	WNW	1	NNW	1	,,	0	,,	0	,,	0	WSW	1	SW	2	SSW	3	SSW	3	1·5
	3·1		3·1		3·0		2·8		2·6		2·5		2·3		2·2		2·2		2·2		2·3		2·3	2·6

September 1882.

Day.	1		2		3		4		5		6	
1	8 Cum	NW —	8 Cum	NW —	5 Cum	NW —	8 Cum	NW	7 Cum-s	NW —	7 Cum	NW
2	8 Cum-s	— —	10 Nim	—	9 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —
3	10 Cum	— —	10 Str	— —	10 Str	— —	10 Str	— —	9 Str	— —	Cir-c 4 Cum-s	NW — —
4	9 Str	— —	7 Cum	— —	2 Cir-c	NE —	1 cum-s	— —	Cir-c 1 Cum-s	NNE — —	Cum 3 Cum-s	— —
5	7 Cum	— —	Cir-s 8 Cum-s	NNW — —	9 Str	— —	8 Cum-s	— —	10 Cum-s	— —	10 Cum-s	— —
6	10 Str	— —	10 Str	— —	9 Str	— —	9 Str	— —	8 Str	— —	Cir-c 10 Cum, Cum-s	E — —
7	Cir-c 3 Str	SE — —	6 Str	— —	6 Str	— —	7 Cum-s	— —	8 Cum-s	— —	8 Cum-s	— —
8	7 Str	—	7 Str	—	7 Str	—	6 Cum-s	— —	5 Cum-s	— —	Cir-c 2 Str	E —
9	2 Str	—	○ —	— —	○ —	—	○ —	— —	1 Cir-s	SE —	2 Str	— —
10	○ —	—	○ —	—	○ —	—	1 Str	— —	2 Str	— —	Cir-s 3 Str	SE — —
11	1 Str	—	2 Str	—	1 Str	—	8 Str	— —	8 Cir-s	SE —	10 Nim	—
12	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—
13	8 Cum	—	9 Cum	—	9 Str	—	Nim 10 Str	—	10 Nim	—	10 Nim	—
14	2 Str	—	5 Str	—	1 Cum-s	—	1 Str	— —	2 Cir-s	SW	Cir-c 3 Str	W —
15	○ —	—	○ —	—	○ —	—	1 Str	— —	1 Cir-s	— —	2 Cum-s	— —
16	8 Cum-s	— —	8 Cum-s	— —	6 Str	— —	8 Str	— —	8 Str	— —	Cir-c 8 Str	NW — —
17	4 Str	—	2 Str	— —	○ —	— —	1 Cum-s	— —	1 Cum-s	— —	1 Cum-s	— —
18	5 Str	— —	7 Str	—	9 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —
19	6 Str	— —	2 Str	— —	2 Str	—	Cir-s 6 —	W — —	6 Cir-s	W —	7 Cir-s	SW —
20	2 Str	—	2 Str	—	○ —	—	○ —	—	1 Str	— —	2 Str	— —
21	○ —	—	3 Str	—	6 Cum-s	— —	4 Cum-s	— —	4 Cum-s	— —	3 Cum-s	— —
22	○ —	— —	○ —	— —	○ —	—	○ —	— —	1 Cum-s	—	2 Cum-s	— —
23	2 Str	— —	2 Str	— —	1 Str	—	1 Cum	— —	Cir-s 3 Str	E — —	Cir-c 2 Cum	SE — —
24	5 Str	— —	3 Str	— —	3 Str	— —	4 Str	— —	5 Str	— —	6 Str	— —
25	8 Nim	—	8 Nim	— —	7 Str	—	4 Str	— —	Cir-c 6 Str	W — —	3 Cum-s	— —
26	Cir-s 2 —	N —	Cir-s 2 Str	NW — —	10 Str	— —	10 Str	— —	10 Str	— —	Cum 3 Cum-s	— —
27	10 Str	— —	9 Str	— —	9 Str	— —	8 Str	—	9 Cum-s	— —	10 Cum-s	— —
28	Cir-s 7 Str	NW — —	4 Str	— —	3 Str	—	8 Str	— —	9 Str	— —	8 Cum-s	— —
29	10 Str	— —	10 Str	— —	10 Str	— —	Cir-c 7 Str	NW —	9 Str	—	9 Str	— —
30	9 Cum-s	— —	10 Str	— —	10 Cum-s	— —	10 Cum-s	— —	10 Cum-s	— —	10 Cum-s	— —
Mean	5·4		5·5		5·1		5·6		6·1		5·9	

7			8			9			10			11			Noon.			Daily Amount of Downfall.
																		m.m.
8 Cum	NW	—	6 Cum	NW	—	7 Cum	NW	—	3 Cum	NW	—	2 Cum	NW	—	4 Cum	NW	—	2·3
9 Nim	—	●	Cir-s 9 Cum-s	—	●	8 Nim	—	●	10 Nim	—	—	10 Nim	—	—	10 Nim	—	—	0·5
Cum-s 3 Str	—	—	Cum-s 5 Str	—	—	4 Cum	—	—	5 Cum	—	—	Cum 9 Cum-s	—	—	Cum 6 Cum-s	—	—	0·1
7 Cum	—	—	Cir-c 4 Cum-s	S —	—	Cir c 5 Cum, Str	S —	—	6 Cum	—	—	7 Cum	—	—	8 Cum-s	—	—	—
10 Cum-s	—	-	Cir-s 7 Cum-s, Cum	ENE —	—	Cir-s 7 Cum, Cum-s	ENE —	—	Cum 9 Cum-s	—	—	Cir-c 7 Cum	ENE —	—	8 Cum	—	—	—
Cir-c 9 Cum, Cum-s	E —	—	9 Cum-s	—	—	Cum 9 Cum-s	—	—	Cum-s 10 Nim, Str	—	●	10 Nim	—	●	9 Cum-s	—	—	—
9 Cum-s	—	—	8 Cum-s	—	—	Cum 9 Cum-s	—	—	9 Cum	—	—	Cir-c 9 Cum, Cum-s	SE —	—	Cum 10 Cum-s	—	—	0·1
Cir-s 3 Cum-s	SW —	—	Cir-s 2 Cum-s	—	—	Cir-s 2 Cum-s	SW —	—	Cir-s 2 Cum-s	—	—	Cir-s 1 Cum-s	—	—	Cir-s 1 Cum	—	—	0·2
2 Cir-s	SE	—	Cir s 2 Str	SE —	—	2 Cir	—	—	0 --	—	—	1 Cir-s	N	--	1 Cir-s	E	—	--
3 Cir-s	SSE	—	1 Cir-s	S	—	2 Cir-s	WSW	--	1 Cir-s	SW	--	1 Cir-s	E	—	1 Cir-s	S	--	0·1
10 Cum-s	—	⊗	10 Cum-s	—	⊗	9 Str	--	⊗	Cir-c 9 Str	ESE --	⊗	Cir-c 9 Str	SE --	⊗	Cir-c 9 Str	S —	⊗	0·1
10 Nim	—	●	10 Nim	—	●	10 Nim	— ●	⊗	10 Nim	— ●	⊗	10 Nim	— ●	⊗	10 Nim	—	●	4·6
10 Nim	—	—	10 Nim	—	●	10 Nim	--	●	10 Nim	--	●	Cum-s 10 Nim	—	—	Cum-s 10 Nim	—	—	0·8
Cir-c 3 Str	W —	⌊	Cir-c 3 Cum	W —	—	Cir-s 2 Cum-s	W —	—	Cir-s 4 Cum-s	W —	—	Cir-c 6 Cum s	W —	—	Cir-c 6 Cum-s	W —	—	—
Cir-c 2 Str	W —	—	1 Cir-s	—	—	1 Cir-s	—	—	Cir-s 1 Cum-s	SW —	—	Cir-s 3 Cum	N —	—	Cir-s 3 Cum	N —	—	—
Cir-c 8 Str	N —	—	Cir-c 8 Cum-s	E —	—	Cir-c 7 Cum-s	N —	—	Cir-c 8 Cum-s	NW —	—	Cir-c 8 Cum-s	NW --	—	Cir-c 7 Cum	N —	—	--
2 Cum	—	—	1 Cum	—	—	2 Cum	--	—	7 Cum	--	—	8 Cum	—	--	9 Cum	—	—	—
Cir-s 9 —	SW —	—	Cir-s 9 Cum	SW —	--	8 Cir-s	SSE	--	9 Cir-s	SSE	—	Cir-s 8 Str	S —	—	6 Cir-c	ESE	—	—
4 Cir-c	SW	—	2 Cir-s	W	—	2 Cir-s	SW	—	6 Cir-s	W	--	7 Cir-s	S	--	4 Cir-s	S	—	—
Cir-c 2 Str	N —	—	Cir-s 8 Str	NW —	—	9 Cum-s	—	—	9 Nim	—	●	10 Nim	--	●	10 Nim	—	●	--
2 Cum-s	—	—	2 Cum-s	—	--	3 Cum-s	—	—	4 Cum-s	—	--	4 Cum	—	—	6 Cum	—	--	1·6
1 Str	—	—	Cir-c 5 Str	SW —	—	6 Cir-c	SW	—	3 Cir	N	--	Cir-c 1 Cir-s	NE SE	—	1 Cir-c	SE	—	—
1 Cum-s	—	—	1 Cum	—	—	1 Cum-s	—	—	1 Cum	--	—	2 Cum-s	—	--	Cir-s 1 Cum	W —	—	—
8 Str	—	—	8 Str	—	—	9 Str	—	—	Cir-s 8 Str	W --	—	Cir-s 8 Str	W —	—	Cir-s 8 Str	S —	—	—
1 Str	—	—	1 Cir	SE	—	Cir 1 Cir-s	N NW	—	2 Cir-s	NW	—	1 Cir-c	W	—	2 Cir	SW	—	--
4 Cum-s	—	—	7 Cum-s	—	—	6 Cum-s	—	—	Cum-s 7 Nim	—	—	7 Cum-s	—	—	9 Cum-s	—	—	—
8 Cum-s	—	—	8 Cum-s	—	—	9 Cum-s	—	—	9 Cum-s	—	—	Nim 10 Str	—	⚹	Cum-s 10 Nim	—	—	—
6 Cum-s	—	--	Cir-c 7 Str	N —	—	1 Cum-s	—	—	Cum 2 Cum-s	—	—	Cum 3 Cum-s	—	—	Cum 5 Cum-s	--	—	—
9 Str	—	—	7 Str	—	—	6 Str	—	—	9 Cum-s	—	—	10 Cum-s	—	⚹	9 Cum-s	—	⚹	—
8 Cum-s	—	—	9 Str	—	—	9 Cum-s	—	—	9 Cum-s	—	--	9 Cum-s	—	—	9 Cum-s	—	—	0·5
5·7			5·7			5·5			6·0			6·4			6·4			10·9

September 1882—*continued.*

Day.	1		2		3		4		5		6	
1	4 Cum	— —	2 Cum	— —	Cir 2 Cum-s	— —	Cir 2 Cum, Str	W — —	Cir 2 Cum-s, Str	W — —	Cir 4 Cir-c, Str	W — —
2	10 Nim	— ●	10 Nim	— ●	10 Cum-s	— —	10 Cum-s	— —	Cir-c 7 Cum-s	NW — —	Cir-c 8 Cum-s	NW — —
3	9 Cum	— —	7 Cum	— —	7 Cum	— —	6 Cum	— —	Cir 4 Cum	NNW — —	Cum 8 Cum-s	— ⌒
4	9 Cum-s	— —	9 Cum-s	— —	Cir s 9 Cum-s	ENE — —	10 Cum-s	— —	10 Cum-s	— —	10 Cum-s	— —
5	Cum 9 Cum-s	— —	Cum 9 Cum-s	— —	Cum 9 Cum-s	— —	9 Cum	— —	10 Cum-s	— —	10 Cum-s	— —
6	9 Cum-s	— —	10 Nim	— ●	9 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —
7	10 Cum	— —	10 Nim	— ●	10 Nim	— ●	10 Nim	— ●	Cum 9 Cum-s	— —	Cum 9 Cum-s	— —
8	Cir-s 2 Cum	— —	Cir-s 2 Cum	— —	Cir-s 1 Cum	SW — —	Cir-s 1 Cum	— —	Cir-s 1 Cum	— —	Cir-s 1 Str	SW — —
9	1 Cir-s	S —	1 Cir-s	S —	1 Cir-s	S —	1 Cir-s	— —	1 Cir-s	S —	2 Cir-s	— —
10	1 Cir-s	S —	2 Cir-s	W —	2 Cir-s	SW —	1 Cir-s	SW —	1 Cir-s	SW —	2 Cir-s	SW —
11	9 Str	— ∞	Cir-s 8 Str	SW — ∞	Cir-s 8 Str	W — ∞	10 Str	— —	Cir-c 9 Str	ESE — ∞	10 Nim	— ●
12	10 Nim	— ●	Cum 9 Cum-s	— ∞	Cir-c 7 Cum-s	SE — —	Cum 8 Nim	— —	Cum 9 Nim	— —	Cum 8 Cum-s	— —
13	Cum-s 10 Nim	— —	10 Nim	— ●	Cum-s 10 Str	— —	Cir-s 6 Cum-s, Nim	SW — —	Cir-c 7 Cum-s, Nim	W — ●	Cir-c 6 Cum-s	SW — —
14	Cir-c 6 Cum	W — —	Cir-c 5 Cum	W — —	Cir-c 5 Cum-s	SW — —	Cir-c 4 Cum-s	SW — —	Cir-c 6 Cum-s	SW — —	Cir-c 4 Cum-s	SW — —
15	Cir-s 3 Cum	N — —	Cir-s 3 Cum	N — —	Cir-c 6 Cum	N — —	Cum 8 Str	— —	Cum 9 Str	— —	Cir s 8 Str	N — —
16	Cir-c 6 Cum-s	S — —	Cir-s 6 Cum	N — —	Cir-c 6 Cum	N — —	Cir-c 5 Cum	— —	Cir-c 7 Cum-s	NE — —	Cir-s 8 Cum-s	NW — —
17	9 Cum	— —	9 Cum	— —	9 Cum	— —	Cir-c 9 Cum-s	SW — —	Cir-c 9 Cum-s	SW — —	9 Cum-s	— —
18	1 Cir-c	SW —	1 Cir-s	SW —	1 Cir-s	SW —	2 Cir-s	SW —	3 Cir-s	SW —	4 Cir-s	SW —
19	1 Cir-s	S —	1 Cir-s	SSE —	1 Cir-s	S —	1 Cir-s	S —	1 Cir-s	S —	Cir-s 1 Str	E — —
20	10 Nim	— ●	9 Cum-s	— —	Cir-s 7 Cum-s	NW — —	Cir-s 5 Cum-s	NW — —	Cir-s 4 Cum-s	SW — —	Cir-s 5 Cum-s	NW — —
21	Cir 7 Cum	SE — —	Cir 7 Cum	NW — —	Cir 6 Cum	NW — —	Cir 4 Cum	NW — —	Cir 3 Cum	SW — —	Cir-c 3 Str	NW — —
22	1 Cir-s	S —	1 Cir-s	S —	1 Cir-s	SW —	1 Cir-s	SW —	1 Cir-s	SW —	1 Cir-s	W —
23	2 Cir-s	— —	2 Cir-s	SW —	2 Cir-s	SW —	3 Cir	E —	5 Cir-s	SW —	3 Cir-s	SW —
24	Cir-s 8 Cum-s	ESE — —	Cir 7 Str	SW — —	7 Cir-s	SW —	6 Cir-c	SW —	Cir-c 5 Str	W — —	Cir-c 7 Str	— —
25	5 Cir-c	W —	Cum-s 9 Str	— —	Cum-s 10 Nim	— ●	10 Nim	— ●	Nim 9 Str	— ●	Cum-s 6 Str	— —
26	Cir 8 Cum-s	NNW — —	Cum 7 Cum-s	— —	Cir 5 Cum-s	NNW — —	Cum 5 Cum-s	— —	Cir-s 5 Cum-s	SE — —	9 Cum-s	— —
27	10 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —	Cir-c 9 Cum-s	NE — —	8 Cum-s	— —	10 Cum-s	— —
28	Cum 6 Cum-s	— —	Cum 8 Cum-s	— —	Cum-s 9 Nim	— ⚹	9 Cum-s	— △	9 Str	— —	9 Str	— —
29	8 Cum-s	— —	8 Cum-s	— —	8 Cum-s	— —	Cir 6 Cum-s	SE — —	Cir 6 Cum-s	SE — —	8 Str	— —
30	9 Cum-s	— △	Cum-s 9 Str	— —	Cum-s 9 Str	— —	9 Str	— —	9 Str	— —	9 Str	— —
Mean	6·5		6·3		6·2		6·0		5·9		6·4	

Sums of Hydrometeors: 45 ●, 4 ⚹, 5 ⌙, 1 ⌓, 14 ∞, 1 △.

September 1882—*continued.*

7	8	9	10	11	Midnight.	Mean Daily Amount of Cloud.
Cir, Cir-c 6 Str — — Cir-c NW 9 Cum-s — —	Cum 8 Str — — 3 Cum-s — —	Cum 7 Cum-s — — 3 Cum-s — ⚌	8 Cum-s — — Cir NNW 3 Cum — ⚌	9 Cum-s — — Cir-c, Cir-s N 3 Cum, Str — ⚌	8 Cum-s — — 9 Cum — ⚌	5·6 8·1
Cir-s NNW 5 Cum, Cum-s — — 10 Cum-s — — Cir-c NE 10 Cum-s — — 8 Cum-s — ● Nim 10 Str — ●	9 Cum — — 5 Cum-s — — 9 Str — — Cum-s 7 Str — — 9 Cum-s — —	9 Cum-s — — Cum 2 Cum-s — — 7 Str — — 2 Cum-s — — 8 Cum-s — —	10 Cum-s — — 9 Cum — — 9 Str — ⚌ 4 Str — ⚌ 4 Cum-s — ⚌	10 Str — — 9 Cum — — 9 Str — — 1 Str — ⚌ Cir-c ENE 5 Cum-s — ⚌	10 Cum-s — — 8 Cum — — 10 Str — — Cum 3 Str — — 9 Cum-s — ⚌	7·4 6·7 8·7 8·0 8·1
2 Str — — 1 Cir-s S — 2 Cir-s SW — Cum-s 9 Str — ⊗ Cum 9 Cum-s — —	2 Str — — 1 Cum-s — — Cir-s ESE 1 Str — ⚌ 10 Str — — 9 Cum-s — ⚌	2 Str — ⚌ 1 Str — ⚌ ○ — — ⚌ 10 Str — — 8 Cum — ⚌	1 Str — ⚌ ○ — — ⚌ ○ — — ⚌ 10 Str — — 1 Str — ⚌	○ — — ⚌ ○ — — ⚌ 1 Str — ⚌ 10 Str — — 7 Cum-s — ⚌	○ — — ⚌ ○ — — ⚌ 2 Str — ⚌ 10 Str — — 8 Cum-s — ⚌	2·5 1·0 1·2 8·3 8·9
10 Str — — 1 Cir-s — — 8 Cum-s — — 8 Cum — — 9 Str — —	10 Str — — 1 Str — — 5 Cir-s — — 9 Cum-s — — 9 Str — —	9 Str — ⚌ 1 Str — ⚌ 1 Str — — 8 Cum-s — ⚌ 6 Str — —	8 Str — ⚌ ○ — — ⚌ ○ — — ⚌ 8 Cum-s — ⚌ 3 Str — —	2 Str — ⚌ 1 Cir-c SW ⚌ 7 Cum-s — — 9 Str — ⚌ 2 Str — —	2 Str — ⚌ ○ — — ⚌ 8 Cum-s — — 2 Str — ⚌ ○ — — —	8·6 3·0 3·4 7·2 5·5
2 Cir s SW — 1 Str — — Cir-c NW 8 Cum-s — — Cir-c NW 2 — — — 1 Cir-c SW —	1 Str — — 1 Str — — Cir-c NW 4 Cum-s — — 1 Str — — 1 Cir-c SW —	1 Str — ⚌ ○ — — — ○ — — ⚌ ○ — — — 1 Cir-s SW —	○ — — ⚌ ○ — — ⚌ 6 Str — ⚌ ○ — — — ○ — — — 1 Str — ⚌	6 Str — ⚌ ○ — — ⚌ ○ — — ⚌ ○ — — — 1 Str — ⚌	6 Str — — ○ — — ⚌ ○ — — ⚌ ○ — — ⚌ 2 Str — ⚌	5·2 2·6 4·7 3·1 1·3
5 Str — — 3 Str — ⚌ 6 Cum-s — — 7 Str Ψ ⚌ 9 Cum-s — —	5 Str — — 3 Str — ⚌ 6 Cum-s — — 8 Str — ⚌ 10 Str — —	5 Str — Ψ 9 Str — — 5 Cum-s — ⚌ Cir-c 7 Str — ⚌ 10 Str — —	3 Str — — 10 Str — — 7 Cum-s — — 8 Str — ⚌ 10 Str — —	4 Str — Ψ 10 Str — ⚌ Cir-c 9 Str — — 8 Str — Ψ 10 Str — —	4 Str — ⚌ 10 Str — — 3 Cir-c — ⚌ Cir-c N 7 Str — Ψ Cir-c SW 8 Str — ⚌ ⊓	2·5 6·7 5·4 6·7 9·2
9 Str — — 9 Str — — 9 Str — —	9 Str — — 9 Str — — 9 Str — —	9 Str — — Cum-s 9 Str — — Cir c N 5 Str — ⊓	9 Str — — 8 Cum-s — — Cir-c 2 Str — —	9 Str — — 9 Str — — 1 Str — ⚌	10 Str — — 9 Cum-s — — 1 Str — ⚌	7·0 8·3 8·0
6·3	5·8	4·8	4·7	5·1	4·9	5·8

October 1882.

Day.	1		2		3		4		5		6	
1	1 Str	—	1 Str	—	1 Str	—	Cum-s 2 Str	—	1 Str	—	1 Str	—
2	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—
3	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	1 Str	—
4	0 -	—	0 —	—	0 —	—	0 —	—	2 Str	—	8 Str	—
5	9 Nim	—	6 Nim	—	2 Str	—	1 Str	—	1 Str	—	1 Str	—
6	10 Str	—	10 Str	—	10 Nim	—	10 Nim	—	10 Cum-s	—	10 Cum-s	—
7	10 Str	—	10 Str	—	10 Str	—	10 Str	—	10 Str	—	10 Str	—
8	6 Str	—	9 Str	—	9 Str	—	7 Str	—	5 Str	—	5 Str	—
9	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—
10	0 —	—	0 —	—	1 Str	—	0 —	—	1 Str	—	1 Str	—
11	9 Str	—	8 Str	—	8 Str	—	9 Str	—	6 Str	—	9 Str	—
12	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—
13	10 Str	—	10 Str	—	10 Str	—	10 Str	—	10 Str	—	10 Str	—
14	10 Str	—	10 Str	—	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—
15	10 Nim	—	10 Str	—	9 Str	—	10 Str	—	9 Str	—	10 Str	—
16	9 Str	—	9 Str	—	9 Str	—	9 Str	—	9 Str	—	Cum s 9 Str	—
17	10 Str	—	9 Str	—	5 Str	—	9 Str	—	9 Str	—	10 Str	—
18	10 Nim	—	9 Str	—	9 Str	—	8 Str	—	8 Str	—	9 Str	—
19	9 Str	—	10 Str	—	10 Str	—	10 Str	—	9 Str	—	Cum-s 3 Str	—
20	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—
21	7 Str	—	10 Str	—	10 Str	—	10 Str	—	10 Str	—	10 Str	—
22	10 Nim	—	10 Nim	—	10 Str	—	10 Str	—	10 Str	—	10 Str	—
23	10 Str	—	10 Str	—	10 Str	—	10 Str	—	10 Str	—	10 Str	—
24	10 Str	—	10 Str	—	10 Str	—	10 Nim	—	10 Nim	—	10 Str	—
25	8 Str	—	8 Str	—	9 Str	—	10 Str	—	9 Str	—	8 Str	—
26	9 Str	—	Cum 8 Cum-s	—	Cum-s 9 Str	—	10 Str	—	10 Str	—	10 Nim	—
27	10 Nim	—	9 Str	—	10 Str	—	10 Cum-s	—	10 Cum-s	—	9 Cum-s	—
28	6 Cir-c	SE	6 Cir-c	SE	9 Str	—	10 Str	—	8 Str	—	Cir-c 7 Str	SW —
29	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—
30	10 Nim	—	10 Nim	—	6 Str	—	4 Str	—	0 —	—	0 —	—
31	10 Nim	—	10 Nim	—	10 Str	—	8 Str	—	6 Str	—	4 Str	—
Mean	7·5		7·5		7·3		7·3		6·8		6·9	

7			8			9			10			11			Noon.			Daily Amount of Downfall.
																		m.m.
1 Str	—	⌊	1 Str	—	—	1 Str	—	—	1 Cum-s	—	—	1 Str	—	—	3 Cum-s	—	—	—
0 —	—	—	0 —	—	—	1 Cir-s	SW	—	1 Cir-s	SW	—	0 —	—	—	0 —	—	—	—
1 Str	—	⌊	1 Str	—	—	1 Str	—	—	1 Str	—	—	1 Str	—	—	1 Str	—	—	—
0 —	—	≈	Cir-s	S		1 Str	—	—	Cir-s	S		2 Cir-s	S	—	Cir	S		—
			1 Str	—	—				1 Str	—	—				2 Cir-s	S	—	
1 Cir	SW	—	1 Cir	SW	—	Cir	SW		9 Str	—	—	9 Str	—	—	9 Str	—	—	0·4
						2 Str	—	—										
10 Nim	—	●	10 Nim	—	●	10 Str	—	—	Cum-s			Cum-s			Cum-s			
									10 Str	—	—	10 Str	—	—	9 Str	—	—	—
10 Str	—	—	10 Str	—	—	10 Nim	—	●	Nim									
									10 Str	—	—	10 Str	—	—	10 Str	—	—	—
Cir-c	SW		Cir-c	SW		Cir-c	SW		Cir-c	SW		Cir-c	SW		Cir-c	SW		
5 Str	—	⊃	5 Str	—	⊃	5 Str	—	—	4 Str	—	—	3 Str	—	—	3 Str	—	—	—
2 Str	—	—	2 Str	—	—	1 Str	—	—	1 Str	—	—	1 Cir-s	SW	—	1 Cir-s	SW	—	—
10 Str	—	≈	10 Str	—	≈	10 Str	—	≈	10 Str	—	≈	Cum-s			Cir	SW		—
												7 Str	—	—	4 Str	—	—	
8 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	—
10 Nim	—	●	10 Str	—	8	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	1·8
10 Str	—	—	9 Str	—	—	9 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	—
10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	0·8
10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	Cum-s			9 Cum s	—	—	0·4
												9 Str	—	—				
4 Str	—	—	Cir	E		Cir-c	SE		Cir-c	SE		Cir-c	NW		Cir, Cir-c	NW		—
			4 Str	—	—	4 Str	—	—	3 Cum-s	—	—	4 Cum-s	—	—	7 Cum, Str	—	—	
10 Str	—	—	9 Cum-s	—	—	9 Cum-s	—	—	9 Cum-s	—	—	9 Cum-s	—	—	8 Cum-s	—	—	—
9 Str	—	—	10 Str	—	—	9 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	0·4
9 Str	—	—	Cir-c	NE		Cum-s			9 Str	—	—	Cir-c	SE		Cum-s			—
			6 Str	—	—	9 Str	—	—				6 Cum-s	—	—	9 Str	—	—	
10 Str	—	—	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	—	10 Nim	—	✳	10 Nim	—	✳	1·4
10 Nim	—	✳	10 Nim	—	—	10 Str	—	—	9 Str	—	—	10 Str	—	—	10 Str	—	—	0·2
9 Str	—	—	9 Str	—	—	9 Str	—	—	10 Str	—	—	10 Str	—	—	9 Str	—	—	0·5
10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Nim	—	✳	—
10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	10 Str	—	—	10 Str	—	—	10 Str	—	—	0·4
9 Str	—	—	9 Str	—	—	9 Str	—	—	9 Str	—	—	10 Nim	—	✳	10 Str	—	—	—
10 Cum-s	—	—	10 Nim	—	—	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	1·1
10 Nim	—	✳	9 Str	—	—	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	4·6
Cum-s			Cir, Cir-c	SE		Cum-s			Cir c	SE								
9 Str	—	—	6 Str	—	—	9 Str	—	—	9 Str	—	—	10 Str	—	—	10 Str	—	—	0·8
10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	6·3
10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	✳	10 Nim	—	—	2·5
10 Str	—	—	9 Str	—	—	9 Str	—	—	9 Str	—	—	9 Str	—	—	10 Str	—	—	4·1
8·0			7·5			7·7			7·9			7·8			7·9			25·7

October 1882—*continued.*

Day.	1		2		3		4		5		6	
1	Cir-c 2 Cum-s	S — —	Cum 2 Cum-s	— —	2 Cum-s	— —	Cum 1 Cum-s	— —	1 Cum-s	— —	1 Cum	— —
2	5 Cir s	SE —	5 Cir	SE —	0 —	— —	0 —	— —	1 Cum-s	— —	1 Str	— —
3	1 Str	— —	1 Str	— —	0 —	— —	1 Str	— —	1 Cir s	S —	1 Cir-s	S —
4	Cir 3 Cir-s	S SE —	Cir 1 Str	NW — —	Cir 1 Cir-s	N NW —	1 Cir-s	NW —	Cir-s 2 Str	NW — —	Cir-s 2 Str	N — —
5	Cir-s 9 Str	— —	Cir-s 9 Str	SW — —	Cir-s 9 Str	SW — —	Cum-s 9 Str	— —	9 Str	— —	9 Str	— —
6	Cum-s 9 Str	— —	Cum s 9 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —
7	Cum s 9 Str	— —	Cum s 9 Str	— —	Cir c 5 Str	SE — —	Cir-c 3 Str	E — —	Cir-c 3 Str	SW — —	Cir-c 4 Str	S — —
8	Cir-c 3 Str	SW — —	Cir-c 4 Str	SW — —	Cir c 4 Str	SW — —	Cir-c 3 Str	SW — —	Cir-c 2 Str	SW — —	1 Str	— —
9	Cir 1 Cir-s	SW — SW	1 Cir-s	W —	Cir 1 Cir-s	SW —	Cir, Cum 3 Cir-s	— —	Cir-s 6 Str	— — —	8 Str	— —
10	Cir 5 Cum	SW — —	Cir-s 5 Cum s	SE — —	Cir-s 5 Str	SE — —	Cir-s 6 Str	SW — —	9 Str	— —	4 Str	— —
11	10 Str	— —	10 Str	— —	9 Str	— —	9 Str	— —	10 Str	— —	10 Nim	— △
12	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Nim	— ●
13	9 Str	— —	8 Str	— —	10 Nim	— ●	10 Str	— —	Nim 10 Str	— — ●	10 Str	— —
14	9 Nim	— ● ⚹	Cir-c 9 Nim	SE — ●	10 Nim	— —	Nim 9 Str	— —	10 Str	— —	10 Str	— —
15	8 Cum-s	— —	8 Cum	— —	9 Cum-s	— —	10 Nim	— ⚹	10 Str	— —	9 Nim	— ⚹
16	Cum-s 9 Str	— —	9 Str	— —	9 Str	— —	9 Str	— —	10 Str	— —	10 Str	— —
17	6 Cum-s	— —	Cir-c 7 Cum-s	— —	Cir-c 8 Cum-s, Str	SE — —	Cir 6 Str	SE — —	Cir-c 7 Str	S — —	7 Str	— —
18	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —
19	Cum-s 9 Str	— —	Cir-s 8 Cum-s, Str	NW — —	Cir-s 4 Cum-s, Str	NW — —	Cir-s 3 Cum-s, Str	NW — —	9 Str	— —	10 Str	— —
20	10 Nim	— —	10 Nim	— ⚹	10 Nim	— —	10 Str	— —	10 Str	— —	10 Str	— —
21	10 Str	— —	10 Str	— —	10 Str	— —	10 Nim	— ● ⚹	10 Nim	— ● ⚹	10 Nim	— ●
22	10 Nim	— ● ⚹	Cir-c 8 Cum-s, Str	NW· — —	9 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —
23	10 Nim	— ⚹	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —
24	9 S r	— —	9 Str	— —	Cum-s 9 Str	— —	9 Str	— —	9 Str	— —	10 Str	— —
25	9 Str	— —	Cum s 7 Str	— —	Cir-c 6 Cum-s, Str	SE — —	9 Str	— —	10 Nim	— ● ⚹	10 Nim	— ● ⚹
26	9 Nim	— —	8 Cum-s	— —	9 Cum-s	— —	10 Nim	— ⚹	10 Nim	— ⚹	10 Cum-s	— —
27	10 Str	— —	10 Nim	— ⚹	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —
28	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Nim	— ●
29	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹
30	10 Nim	— ☩ ⚹	10 Nim	— ☩ ⚹	10 Nim	— ☩ ⚹	10 Nim	— ☩ ⚹	10 Str	— ☩	10 Str	— ☩
31	10 Str	— —	10 Str	— —	Cir-c 6 Str	NW — —	Cir-s 6 Str	NW — —	4 Str	— —	1 Str	— —
Mean	7·9		7·6		7·3		7·3		7·8		7·7	

Sums of Hydrometeors : 28 ●, 126 ⚹, 12 ☩, 12 ⌙, 2 ∞, 6 ≋, 3 ⌓, 4 △.

7		8		9		10		11		Noon.		Mean Daily Amount of Cloud.
1 Str	— —	1 Str	— —	0 —	— —	0 —	— ⊎	0 —	— ⊎	0 —	— ⊎	1·1
0 —	— ⊎	0 —	— ⊎	0 —	— ⊎	0 —	— ⊎	0 —	— ⊎	0 —	— ⊎	0·2
1 Cir-s	— ⊎	0 —	— ⊎	0 —	— ⊎	0 —	— ⊎	0 —	— ⊎	0 —	— ⊎	0·5
4 Str	— —	4 Str	— ⊎	4 Str	— ⊎	7 Cum-s	— ⊎	8 Str	— ⊎	9 Str	— —	2·6
9 Str	— —	10 Str	— —	10 Str	— ⊎	9 Str	— ⊎	3 Str	— ⊎	10 Str	— —	6·5
10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	9·9
4 Str	— —	5 Str	— —	6 Str	— —	7 Str	— ⌓	9 Str	— —	7 Str	— —	8·0
1 Str	— ⊎	0 —	— ⊎	1 Str	— ⊎	1 Str	— ⊎	1 Str	— ⊎	1 Str	— ⊎	3·7
9 Str	— —	6 Str	— ⊎	7 Str	— ⊎	2 Str	— ⊎	1 Str	— ⊎	0 —	— ⊎	2·2
6 Str	— ⊎	5 Str	— ⊎	4 Str	— ⊎	5 Str	— ⊎	4 Str	— ⊎	3 Str	— ⊎	4·8
10 Nim	— △	10 Nim	— △	10 Nim	— △	10 Nim	—● ⚹	10 Str	— —	10 Str	— —	9·4
10 Nim	—●	10 Nim	—●	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10·0
10 Nim	—●	10 Nim	—●	Cum 10 Str	— —	Cum 10 Str	— —	10 Str	— —	10 Str	— —	9·8
10 Str	— —	10 Nim	— ⚹	10 Nim	—● ⚹	10 Nim	—● ⚹	10 Cum-s	— —	10 Str	— —	9·9
9 Str	— —	10 Str	— ⊎	9 Str	— ⊎	7 Str	— —	8 Str	— ⊎	10 Str	— —	9·3
10 Str	— —	9 Str	— ⊎	9 Str	— ⊎	10 Str	— ⊎	9 Str	— ⊎	10 Str	— —	8·0
1 Str	— ⊎	9 Str	— ⊎	9 Str	— ⊎	10 Str	— —	10 Str	— —	10 Str	— —	8·2
9 Str	— —	10 Nim	— ⚹	10 Nim	— ⚹	5 Str	— ⊎	10 Str	— —	9 Str	— ⊎	9·3
10 Str	— —	10 Nim	— ⚹	9 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	8·4
10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Str	— —	10 Str	— —	10·0
10 Nim	—●	10 Nim	—●	10 Nim	—● ⚹	10 Nim	—● ⚹	10 Nim	—● ⚹	10 Nim	—● ⚹	9·8
9 Str	— —	9 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	9·6
10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Nim	—● ⚹	10 Nim	—● ⚹	10·0
10 Str	— —	10 Str	— —	10 Str	— —	9 Str	— ⊎	9 Str	— —	8 Str	— —	9·6
Cum-s 9 Str	— —	8 Cum-s	⊍ ⊎	6 Cum-s	— ⊍	10 Cum-s	— —	9 Str	— —	9 Str	— —	8·7
10 Str	— —	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Str	— —	10 Str	— —	9·7
10 Str	— —	10 Str	— —	Cum-s 9 Str	— —	Cir-c 5 Str	SE —⊍ ⊎	5 Cir-c	SE ⊍ ⊎	6 Cir-c	SE ⊍	9·2
10 Nim	—● ⚹	10 Nim	—● ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	9·1
10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10·0
10 Nim	— ⚹	10 Nim	— ⚹	7 Str	— —	10 Str	— —	10 Str	— —	10 Nim	— ⚹	8·6
1 Str	— —	1 Str	— ⊎	1 Str	— —	10 Str	— —	10 Str	— —	10 Nim	— ⚹	7·2
7·5		7·6		7·5		7·6		7·6		7·8		7·6

November 1882.

Day.	1		2		3		4		5		6	
1	10 Nim	— ⚹	2 Str	— ⛉	3 Str	— ⛉	0 —	— —	0 —	— —	0 —	— —
2	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —
3	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	Cir-c 2 Str	N —	2 Str	— —
4	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹
5	10 Str	— ⛇	10 Str	— ⛇	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —
6	0 —	— ⛇	0 —	— —	0 —	— —	1 Str	— ⛇	1 Str	— ⛇	7 Str	— —
7	10 Nim	— ⚹	3 Str	— ⛇	0 —	— ⛇	2 Str	— —	0 —	— ⛇	2 Str	— —
8	1 Str	— ⛇	0 —	— ⛇	0 —	— ⛇	0 —	— ⛇	0 —	— ⛇	0 —	— ⛇
9	10 Nim	— ⚹	8 Str	— —	3 Nim	— ⚹ ⛇	3 Str	— ⛇	3 Nim	— ⚹ ⛇	10 Str	— —
10	8 Nim	— ⚹	10 Nim	— ⚹	10 Str	— —	10 Str	— —	10 Str	— —	9 Str	— ⛇
11	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	9 Str	— —	7 Str	— —
12	1 Str	— ⛇	0 —	— ⛇	0 —	— ⛇	0 —	— ⛇	0 —	— ⛇	0 —	— ⛇
13	10 Str	— ⛇	10 Str	— ⛇	6 Str	— ⛇	4 Str	— ⛇	2 Str	— ⛇	1 Str	— ⛇
14	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Nim	— ⚹
15	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Str	— —	10 Str	— —	10 Str	— —
16	10 Str	— —	10 Str	— —	5 Str	— —	4 Str	— ⛇	4 Str	— ⛇	6 Str	— —
17	3 Str	— ⛇	3 Str	— ⛇	2 Str	— ⛇	2 Str	— ⛇	0 —	— ⛇	0 —	— —
18	7 Str	— ⛇	9 Str	— ⛇	8 Str	— ⛇	8 Str	— ⛇	3 Str	— ⛇	4 Str	— ⛇
19	9 Str	— —	9 Str	— —	9 Str	— —	9 Str	— —	10 Str	— —	10 Str	— —
20	3 Str	— —	7 Str	— ⛇	5 Str	— ⛇	7 Str	— —	7 Str	— —	7 Str	— ⛇
21	3 Str	— ⛉	Cir-c 3 Str	— ⛉	3 Str	— —	4 Str	— —	1 Str	— ⛇	2 Str	— —
22	2 Cir-s	NW ⛉	1 Str	— ⛉	2 Str	— —	0 —	— ⛇	0 —	— —	0 —	— —
23	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —
24	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —
25	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —
26	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —
27	7 Str	— ⛉	7 Str	— ⛉	2 Str	— ⛇	6 Str	— —	6 Str	— —	9 Str	— —
28	10 Nim	— ⚹ ⛉	10 Str	— —	10 Str	— —	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹
29	10 —	— ✢	10 —	— ✢	1 Cir-s	NNW ⛉ ⛇	0 —	— —	Cir-c 8 Str	NNW — ✢ ⛉	10 Str	— ✢
30	0 —	— ⛇	0 —	— ⛇	0 —	— ⛇	0 —	— ⛇	0 —	— —	0 —	— —
Mean	7·5		7·1		6·0		6·0		5·5		6·2	

November 1882.

7			8			9			10			11			Nooo.			Daily Amount of Downfall.
																		m.m.
0	—	— —	4 Str		— —	Cir-c 3 Str		— —	Cir 1 Cir-s	SW	—	1 Cir-s		— —	1 Cir-s		— —	0·5
						Cir-s			Cir-s	SW		Cir-s	SW		Cir-s	SW		
10 Str		— —	10 Str		— —	10 Str		— —	10 Str		— —	10 Str		— —	10 Str		— —	—
6 Str		— —	7 Str		— —	10 Str		Mirage	10 Str		— —	10 Str		— —	10 Str		— —	0·2
10 Nim		— —	10 Str		— —	10 Str		— —	10 Str		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	2·5
10 Str		— —	10 Str		— —	10 Str		— —	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	2·8
10 Str		— —	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	1·3
0	—	— —	6 Str		— —	7 Str		— —	7 Str		— —	7 Str		— —	7 Str		— —	3·3
						Cir-s									Cir-s	ESE		
1 Str		— —	3 Str		— —	3 Str		— —	2 Cir-s		— —	3 Cir-s		— —	3 Cum		— —	—
			Cir-c	N		Cir-c	N		Cir-c	NE								
5 Str		— —	4 Str		— —	8 Str		— —	9 Str		— —	10 Nim		— ⚹	10 Nim		— ⚹	0·5
9 Str		— —	9 Str		— —	9 Str		— —	8 Str		— —	5 Str		— —	Cir-c 7 Str	SW	— —	0·5
Cir-s 6 Str	SW	— —	Cir-s 7 Str	SW	— —	Cir-s 3 Str	SW	— —	Cir-c, Cir-s 4 Str	W	— —	Cir-c, Cir-s 3 Str	W	— —	Cir-c, Cir-s 3 Str	W	— —	—
1 Str		— —	1 Str		— ⌙	1 Cir-s	S	⌙	1 Cir-s	S	—	2 Cir-s	SW	—	2 Cir-s	SW	—	—
4 Str		— —	9 Str		— —	4 Str		— —	3 Str		— —	1 Str		— ⊹	1 Str		— ⊹	—
10 Str		— —	10 Str		— —	10 Str		— —	10 Str		— ⊹	10 Str		— —	10 Str		— —	0·2
10 Str		— —	10 Str		— ∞	10 Str		— ∞	10 Str		— ∞	10 Str		— —	10 Str		— —	—
7 Str		— —	9 Str		— —	7 Str		— —	6 Str		— —	5 Str		— —	8 Str		— —	—
10 Str	—	⌙ ≋	10 Str	—	≋ ⚹	10 Str	—	≋ ⚹	10 Str	—	≋ ⚹	10 Str	—	≋ ⚹	10 Str	—	≋ ⚹	—
9 Str		— —	8 Str		— —	7 Cir	SW	—	Cir 6 Cir-c	SW	—	Cir, Cir-s 8 Str	SW	— —	10 Str		— —	0·1
10 Str		— —	10 Str		— —	10 Str		— —	10 Str		— —	10 Str		— —	10 Str		— —	—
8 Str		— —	10 Str		— —	Cir, Cir-s 6 Str	SW	— —	Cir, Cir-s 6 Str	SW	— —	Cir-s 10 Str		— —	Cir-s 10 Str		— —	—
1 Str		— —	1 Str		— ⌙	Cir-s 1 Str		— —	Cir-s 1 Str	SE	— —	Cir-s 1 Str	SE	— —	Cir-s 1 Str		— —	—
10 Str		— ≋	10 Str		— ≋	5 Str		— ≋	10 Str		— ≋	10 Str		— ≋	10 Str		— ≋	—
10 Str		— ⌙	10 Str		— ≋	10 Nim		— ∞ ⚹	10 Nim		— ∞ ⚹	10 Nim		— ∞ ⚹	10 Nim		— ∞ ⚹	—
10 Str		— —	10 Str		— —	10 Str		— —	10 Str		— —	10 Str		— —	10 Str		— —	0·1
10 Str		— —	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	—
10 Str		— —	10 Str		— —	10 Str		— —	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	0·5
10 Str		— —	10 Str		— —	10 Str		— —	Cir-c 9 Str	NW	— —	Cir-c 8 Str	NW	— —	Cir-c 3 Str	NW	— —	2·5
10 Str		— —	10 Str		— —	10 Str		— ⊹ ⚹	10 Str		— —	10 Str		— —	10 Nim		— ⊹ ⚹	1·0
10 Str		— ⊹	10 Str		— ⊹ ≋	6 Cir-c, Cir-s	NW	—	2 Cir-s		— —	1 Cir-s		— —	1 Cir-s		— —	11·9
1 Str		— 🜲	Cir-s 1 Str	SE	— —	2 Cir-s		— —	2 Cir-s	NW	—	1 Cir-s	NW	—	1 Cir-s		— —	—
7·2			8·0			7·5			7·2			7·2			7·1			27·9

November 1882—*continued.*

Day.	1			2			3			4			5			6		
1	1 Cir-s	—	—	1 Cir-s	—	—	1 Cir-s	—	—	7 Str	—	—	9 Str	—	—	9 Str	—	—
2	Cir-s 10 Str	—	—	Cir-s 10 Str	—	—	Cir-s 10 Str	—	—	Cir-s 10 Str	—	—	10 Str	—	—	10 Str	—	—
3	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Nim	—	⚹
4	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	8 Str	—	—
5	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	10 Str	—	—	10 Nim	—	⚹
6	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹
7	Cir-s 7 Str	NW —	—	Cir-s 7 Str	WNW —	○	Cir 6 Str	WNW —	—	Cir-s 8 Str	—	—	5 Str	—	--	6 Str	—	—
8	Cir-c 6 Cir-s	ESE	—	Cir-c 8 Cir-s	NW	—	Cir-c 8 Cir-s	ESE	—	Cir-c 10 Cir-s	—	∞	10 Str	—	--	10 Str	—	—
9	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	9 Str	—	—	10 Str	—	Ш	10 Str	—	—
10	8 Str	—	—	9 Str	—	—	9 Str	—	—	9 Str	—	—	9 Str	—	--	9 Str	—	—
11	Cir-s 2 Cir-s	W	—	Cir-c 2 Cir-s	W	—	Cir-c 6 Cir-s	NW	—	Cir-c, Cir-s 7 Str	NW —	—	2 Str	—	Ш	1 Str	—	Ш
12	Cir, Cir-s 4 Str	SW —	—	Cir-s 6 Str	SE —	—	Cir-c 7 Str	NE —	—	9 Str	—	Ш	2 Str	—	Ш	2 Str	—	—
13	1 Str	—	⊹	1 Str	—	⊹	1 Str	—	—	1 Str	—	—	1 Str	—	Ш	○ —	—	Ш
14	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	--	10 Str	—	—
15	10 Str	—	∞	10 Str	—	∞	10 Str	—	—	10 Str	—	—	8 Str	—	—	8 Str	—	—
16	8 Str	—	—	9 Str	—	—	9 Str	—	—	9 Str	—	—	7 Str	—	Ш	2 Str	—	Ш
17	10 Str	— ≋	⚹	Cum 8 Str	—	∞	10 Str	—	≋	7 Str	—	⊍	8 Str	--	—	8 Str	—	—
18	10 Str	—	○	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—
19	10 Cum-s	—	—	Cir-c 9 Cum-s	SW —	—	Cir-c 8 Str	SW —	⊕	9 Str	—	—	9 Str	—	—	7 Str	—	⋓
20	8 Cir-s	SW	—	Cir-c 5 Cir-s	NNW	—	Cir 3 Cir-s	S W	—	4 Str	—	—	1 Str	--	Ш	1 Str	—	Ш
21	○ —	—	—	1 Cir-s	—	—	○ —	—	—	1 Cir s	—	—	1 Str	—	Ш	○ —	—	—
22	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—
23	10 Nim	— ≋	⚹	10 Nim	— ≋	⚹	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—
24	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—
25	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	--	⚹	10 Str	—	—
26	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	— ⊹	⚹	10 Nim	—	⚹
27	Cir-s 2 Str	—	—	Cir-s 2 Str	—	—	Cir-s 2 Str	—	—	2 Str	—	—	1 Str	—	--	○ —	—	Ш
28	10 Nim	— ⊹	⚹	10 Nim	— ⊹	⚹	10 Nim	— ⊹	⚹	10 Nim	— ⊹	⚹	10 Nim	— ⊹	⚹	10 Nim	— ⊹	⚹
29	1 Cir-s	NW	○	Cir-c 5 Cir-s	NW	○	Cir-c 8 Cir-s	NW	○	Cir-s 9 Str	NW —	—	10 Str	—	—	3 Str	—	—
30	3 Cir-s	NW	—	Cir 4 Cir-s	NW	—	Cir-s 5 Str	—	—	8 Str	—	—	2 Str	—	Ш	4 Str	—	Ш
Mean	7·4			7·5			7·8			8·3			7·4			6·9		

Sums of Hydrometeors: 112 ⚹, 3 ◑, 11 ∞, 18 ≋, 29 ⊹, 5 ⌙.

November 1882—*continued.*

7	8	9	10	11	Midnight.	Mean Daily Amount of Cloud.
10 Str — —	10 Str — —	7 Str — —	10 Str — —	10 Str — —	10 Str — —	4·6
10 Str — —	10 Nim — ● ✳	10 Nim — ● ✳	10 Nim — ● ✳	10 Str — —	10 Str — —	10·0
10 Nim — ✳	10 Nim — ✳	10 Nim — ✳	10 Nim — ✳	10 Nim — ✳	10 Nim — ✳	9·0
8 Str — 🌧	3 Str — ✢ 🌧	2 Str — 🌧	2 Str — 🌧	6 Str — 🌧	8 Str — —	8·6
0 — — 🌧	2 Str — 🌧	0 — — 🌧	0 — — —	0 — — —	0 — — 🌧	7·6
7 Str — —	10 Str — —	10 Nim — ✳	10 Nim — ✳	10 Nim — ✳	10 Nim — ✳	7·7
1 Str — 🌧	1 Str — 🌧	8 Str — 🌧	5 Str — —	3 Str — 🌧	2 Str — 🌧	4·6
10 Str — —	10 Str — 🌧	10 Str — —	10 Str — —	10 Str — —	10 Str — —	5·3
10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Nim — ✳	8·4
10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	9·0
0 — — 🌧	1 Str — 🌧	1 Str — 🌧	2 Str — 🌧	2 Str — 🌧	0 — — 🌧	4·5
4 Str — 🌧	7 Str — 🌧	7 Str — 🌧	9 Str — 🌧	9 Str — 🌧	5 Str — 🌧	3·3
0 — — 🌧	0 — — 🌧	0 — — 🌧	2 Str — 🌧	10 Str — 🌧	10 Str — —	3·4
10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10·0
6 Str — 🌧	3 Str — —	3 Str — —	9 Str — —	10 Str — —	10 Str — —	9·0
0 — — 🌧	0 — — 🌧	0 — — 🌧	0 — — —	0 — — 🌧	0 — — 🌧	5·2
5 Str — 🌧	4 Str — 🌧	3 Str — 🌧	4 Str — 🌧	4 Str — 🌧	5 Str — 🌧	6·1
10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	8 Str — —	8·5
Cir-c 6 Str — ⦶	8 Str — —	8 Str — —	5 Str — 🌧	4 Str — 🌧	3 Str — —	8·4
1 Str — 🌧	0 — — 🌧	0 — — 🌧	2 Cir-s — ⦶ 🌧	Cir-s 3 Str — —	Cir-s 3 Str — —	4·9
0 — — —	0 — — —	0 — — —	0 — — 🌧	0 — — ⦶ 🌧	1 Cir-s NW ⦶ 🌧	1·1
10 Str — —	10 Str — —	10 Str — 🌫	10 Str — 🌫	10 Str — —	10 Str — —	7·5
10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10·0
10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10·0
10 Nim — ✳	10 Nim — ✳	10 Nim — ✳	10 Nim — ✳	10 Str — —	10 Str — 🌫	10·0
10 Nim — ✢ ✳	10 Str — ✢	10 Str — ✢ 🌧	9 Str — ✢	7 Str — ✢	7 Str — 🌧	9·7
1 Str — 🌧	1 Cir-s — —	2 Str — —	3 Str — —	3 Str — 🌧	6 Str — 🌧	4·7
10 Nim — ✢ ✳	10 Nim — ✢ ✳	10 Nim — ✢ ✳	10 Str — ✢	9 Str — ✢	10 Str — ✢	10·0
3 Str — —	3 Str — —	0 — — 🌧	0 — — 🌧	0 — — 🌧	0 — — 🌧	4·6
2 Str — 🌧	2 Str — 🌧	3 Str — 🌧	4 Str — 🌧	4 Str — 🌧	4 Str — ⦶ 🌧	2·2
6·1	6·2	6·1	6·5	6·8	6·7	6·9

December 1882.

Day.	1		2		3		4		5		6	
1	9 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —
2	0 —	— —	10 Str	— —	Cir-c 9 Str	SE —	Cir-c 5 Str	SE —	Cir-c 4 Str	SE —	10 Str	— —
3	7 Str	— —	10 Str	—	0 —	—	1 Str	—	5 Str	—	7 Str	—
4	0 —	—	1 Str	—	1 Str	—	1 Str	—	1 Str	—	4 Str	—
5	0 —	—	0 —	— —	0 —	— —	0 —	—	0 —	—	0 —	— —
6	0 —	—	0 —	—	0 —	—	0 —	—	0 —	— —	0 —	—
7	0 —	—	0 —	—	0 —	—	0 —	—	0 —	— —	0 —	— —
8	10 Str	— —	10 Str	— —	10 Str	— —	10 Nim	—	10 Str	— —	10 Str	— —
9	7 Str	— —	8 Str	— —	10 Str	— —	9 Str	—	6 Str	—	2 Str	—
10	0 —	—	0 —	—	0 —	— —	0 —	— —	1 Str	—	0 —	—
11	0 —	—	1 Str	—	5 Str	—	6 Str	—	7 Str	—	7 Str	— —
12	3 Str	— —	4 Str	—	2 Nim	—	2 Nim	—	5 Str	—	5 Nim	—
13	2 Str	—	2 Nim	—	2 Nim	—	2 Nim	—	1 Str	— —	1 Str	—
14	0 —	—	0 —	—	0 —	— —	0 —	—	0 —	—	0 —	—
15	0 —	— —	0 —	—	3 Str	— —	6 Str	— —	5 Str	— —	9 Str	— —
16	6 Str	—	5 Str	—	3 Str	—	2 Str	—	8 Str	— —	3 Str	—
17	7 Str	— —	9 Str	— —	0 —	— —	0 —	— —	0 —	— —	10 Str	— —
18	5 Str	—	3 Str	— —	2 Str	— —	1 Str	— —	6 Str	— —	3 Str	— —
19	0 —	—	2 Str	—	2 Str	—	3 Str	—	2 Str	—	1 Str	—
20	2 Str	—	2 Str	—	0 —	—	1 Str	— —	2 Str	—	3 Str	—
21	5 Str	—	4 Str	— —	7 Str	—	7 Str	—	7 Str	—	9 Str	—
22	0 —	—	0 —	—	1 Str	— —	1 Str	— —	1 Str	—	4 Str	—
23	10 Nim	—	10 Nim	—	10 Nim	—	10 Cum-s	— —	10 Cum-s	— —	10 Cum-s	— —
24	6 Cum-s Cum	—	3 Str	—	2 Str	— —	2 Str	— —	7 Str	— —	6 Cum-s	— —
25	9 Str Cir-s	— SW	10 Str Cum-s	— —	10 Str	— —	10 Str	— —	Cum 9 Cum-s	— —	7 Str	— —
26	6 Str		4 Str	— —	4 Str	— —	7 Str	—	9 Cum-s	—	9 Cum-s	— —
27	1 Str	—	1 Str	—	1 Str	—	2 Str	—	2 Str	— —	1 Str	— —
28	10 Str	—	10 Str	—	10 Str	—	10 Str	—	10 Str	—	Cir-s 6 Str	NW — —
29	0 —	—	0 —	—	0 —	—	3 Str	—	5 Str	— —	5 Str	—
30	7 Str	— —	7 Str	—	7 Str	—	8 Str	—	9 Str	—	9 Str	—
31	1 Str	—	0 —	—	0 —	— —	0 —	—	0 —	—	0 —	—
Mean -	3·6		4·1		3·6		3·9		4·7		4·9	

December 1882.

7	8	9	10	11	Noon.	Daily Amount of Downfall.
						m.m.
10 Str — —	10 Str — —	10 Str — —	10 Nim — ⚹	10 Str — —	10 Str — —	—
10 Str — —	10 Str — —	10 Str — —	Cir-s 10 Str — —	Cir-c NW 8 Cir-s — —	Cir c NW 9 Cir-s — —	0·6
10 Str — —	10 Str — —	10 Nim — ⚹	Cir, Cir-c 7 Nim — ○	Cir-c NW 9 Str — —	Cir, Cir-c NW 6 Str — —	0·1
6 Str — —	6 Str — —	10 Str — ∞	10 Str — ∞	10 Nim —∞⚹	10 Nim —∞⚹	—
1 Str — —	2 Str — —	2 Str — —	2 Str — — —	1 Str — —	o — — —	—
o — — —	o — — —	1 Cir-s — —	o — — —	o — — —	o — — —	—
o — — ☩	o — — ☩	1 Cir-s NE ☩	1 Cir-s NE ☩	1 Cir-s —○☩	1 Cir-s NE —	—
10 Str — —	10 Str — —	9 Str — —	Cir-c 5 Cir-s NNW —	Cir-c, Cir-s NW 4 Str — —	Cir-s NW 7 Str — —	—
7 Str — ♕	10 Nim — ⚹	10 Nim — —	Cir-s 9 Nim — ⚹	Cir, Cir-s NW 8 Str — —	Cir-c NW 8 Str — —	0·5
1 Str — —	1 Str — —	3 Str — —	4 Str — —	5 Str — —	6 Str — —	—
10 Str — —	10 Str — —	10 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	—
4 Str — —	10 Str — —	10 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	1·3
4 Str — —	4 Str — —	5 Str — —	5 Str — —	4 Cum-s — —	Cir-s NE 5 Cum-s — —	0·9
1 Str — —	1 Str — —	2 Cir-s — —	Cir-s NW 7 Str — —	10 Str — —	10 Str — —	0·1
7 Str — —	10 Str — —	10 Str — —	10 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	0·2
4 Str — ♕	6 Str — —	9 Str — —	9 Cum-s — —	10 Cum-s — —	10 Str — —	2·3
10 Str — —	10 Str — —	10 Str — —	10 Nim — ⚹	10 Nim — ⚹	Cir-s 9 Nim — ⚹	5·7
3 Str — —	Cir-s NW 6 Str — —	Cir-s NW 7 Str — —	Cir, Cir-s NW 5 Str — —	Cir-s NW 5 Str — —	Cir, Cir-s NW 5 Str — —	0·1
4 Str — —	4 Str — —	7 Str — —	Cir 6 Str — —	Cir 7 Str — —	Cir, Cir-s 6 — — —	—
5 Str — —	10 Str — —	10 Str — —	Cir-c ENE 6 Cir-s — —	Cir ENE 5 Cir-s — —	Cir NE 5 Cir-s — —	—
5 Str — —	10 Str — ☩	10 Str — ☩	9 Str — ○	Cir-s 6 Str — —	Cir-s 4 Str — —	—
5 Str —⌊♕	8 Cum-s — —	8 Cum-s — —	8 Cum-s — —	9 Cum-s — —	9 Cum-s — —	—
10 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	7 Nim —○⚹	Cir-c NW 6 Cir-s — ○	Cir-c 5 Cir-s — —○	1·8
1 Str — —	1 Str — —	Cir-s SE 2 Str — —	Cir-s SE 2 Str — —	Cir-s 4 Str — —	Cir-s 8 Str — —	—
4 Str — —	4 Str — —	1 Str — —	1 Str — —	1 Str — —	3 Str — —	0·6
10 Str — —	10 Str — —	10 Str — —	Cum-s 9 Str — —	Cir-s 6 Cum — —	Cir-s 7 Cum — —	—
1 Str — —	1 Str — —	2 Str — —	Cir WSW 3 Str — —	Cir, Cir-s SW 2 Str — —	Cir, Cir-s SW 1 Str — —	—
4 Str — —	4 Str — —	5 Str — —	6 Str — —	5 Str — —	5 Str — —	0·2
7 Str — ♕	7 Str — —	8 Str — —	Cir-c SE 5 Cir-s — —	2 Cir-s SE —	2 Cir-s — —	—
7 Str — —	10 Str — —	10 Str — —	10 Str — ☩	10 Str — —	9 Str — ☩	—
o — — —	o — — —	o — — —	o — — —	o — — —	o — — —	—
5·2	6·3	6·8	6·3	6·1	6·2	14·4

December 1882—*continued.*

Day.	1	2	3	4	5	6
1	Cir-c NW 8 Cir-s — —	10 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹
2	Cir-s 9 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —
3	Cir-c 5 Cir-s NW —	Cir, Cir-s NW 4 Str — —	Cir-c, Cir-s NW 4 — — —	2 Str — —	1 Str — 𝍐	1 Str — 𝍐
4	10 Nim —∞ ⚹	Cir SW 9 Nim —∞ ⚹	10 Str — —	9 Str — —	7 Str — —	4 Str — —
5	0 — — —	0 — — —	1 Str — —	1 Str — —	0 — — —	0 — — —
6	0 — — —	0 — — —	1 Str — —	0 — — —	0 — — 𝍐	0 — — 𝍐
7	Cir-s NE 3 Str — —	Cir-s NE 4 Str — —	Cir-s NE 4 Str — —	4 Str — —	6 Str — —	9 Str — —
8	Cir-s NW 7 Str — —	Cir 6 Cir-s — —	10 Str — —	8 Str — —	6 Str — —	1 Str — —
9	Cir-c, Cir-s 7 Str — —	Cir, Cir-s NW 6 Str — —	Cir-s NW 3 Str — —	Cir-s NW 2 Str — —	1 Str — 𝍐	0 — — 𝍐
10	7 Str — —	7 Str — —	7 Str — —	7 Str — —	3 Str — —	2 Str — 𝍐
11	8 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	7 Nim — ⚹	6 Nim —⚹ 𝍐
12	Cir-s 9 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	6 Nim — ⚹	3 Nim — ⚹
13	Cir-s NE 5 Str — ○	3 Cir-c — —	2 Str — —	1 Str — —	1 Str — 𝍐	0 — — 𝍐
14	10 Str — —	10 Str — —	10 Str —∞ ⚵	10 Nim — ⚹	9 Nim — ⚹	6 Nim —Ψ 𝍐
15	10 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	10 Str — —	10 Str — —	10 Nim — ⚹
16	10 Str — —	10 Str — —	10 Nim — ⚹	10 Nim —⚵ ⚹	10 Nim — ⚹	10 Nim — ⚹
17	6 Cir-s —⚹ ○	Cir-c 4 Cir-s NW —	Cir-c NW 5 Str — —	5 Str — ⛛	10 Str — —	10 Str — —
18	Cir 4 Cir-s NW —	Cir 5 Cir-s NW —	3 Cir-s NW —	1 Str — 𝍐	1 Str — —	0 — — 𝍐
19	Cir 7 Str — —	7 Str — —	8 Str — —	7 Str — —	6 Str — ⛛	2 Str — —
20	Cir 4 Cir-s — —	2 Cir-s — —	1 Cir-s — —	2 Str — ⛛	2 Str — 𝍐	3 Str — —
21	Cir-s 7 Str — —	Cir-s SE 4 Str — —	Cir-s 3 Str — —	Cir-s 4 Str — ⛛	Cir-s 4 Str — —	Cir-c 2 Str — ⛛
22	9 Cum-s — —	10 Cum-s — —	10 Cum-s — —	10 Cum-s — —	10 Cum-s — —	10 Nim — ⚹
23	8 Nim —○ ⚹	Cir-c 7 Cir-s — ⚵	Cir-c 8 Str — —	4 Str — —	Cir-c 4 Str — —	2 Str — —
24	Cum-s 9 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —
25	6 Str — —	5 Str — —	5 Str — —	9 Str — —	5 Str — —	7 Str — —
26	Cir-s 8 Cum — —	Cir. Cir-s SW 5 Cum — —	Cir-s 8 Str — —	5 Str — —	2 Str — 𝍐	1 Str — 𝍐
27	Cir, Cir-s SW 4 Str — ○	Cir, Cir-s WNW 7 Str — —	4 Str — —	Cir-c NW 4 Str — —	4 Str — 𝍐	10 Str — —
28	1 Str — —	1 Str — —	1 Str — —	0 — — —	0 — — 𝍐	0 — — 𝍐
29	Cir 2 Cir-s NW —	Cir NW 3 Cir-s — —	3 Str — —	3 Str — —	4 Str — 𝍐	2 Str — 𝍐
30	10 Str — ⚵	10 Str — ⚵	Cum-s 5 Str — ⚵	Cum-s 4 Str — ⚵	2 Str —⚵ 𝍐	0 — — 𝍐
31	0 — — —	0 — — —	0 — — —	0 — — —	0 — — 𝍐	0 — — 𝍐
Mean	6·2	6·1	6·0	5·5	4·8	4·2

Sums of Hydrometeors: 93 ⚹, 1 ⌴, 8 ∞, 4 ≋, 27 ⚵.

December 1882—*continued.*

7		8		9		10		11		Midnight.		Mean Daily Amount of Cloud.
3 Nim	—Ш ⚹	3 Nim	— ⚹	4 Nim	— ⚹	4 Nim	—Ш ⚹	6 Nim	— ⚹	5 Nim	— ⚹	8·4
10 Str	— —	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	9 Str	— —	9 Str	— —	8·8
1 Str	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	4·2
0 —	— Ш	1 Str	— Ш	1 Str	— Ш	2 Str	— Ш	0 —	— Ш	0 —	— Ш	4·7
0 —	— —	0 —	— —	0 —	— —	0 —	— Ш	0 —	— Ш	0 —	— Ш	0·4
0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0·1
10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	3·9
2 Str	— Ш	0 —	— —	0 —	— Ш	4 Str	— Ш	6 Str	— Ш	6 Str	— —	6·7
0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	4·7
0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— —	2·2
5 Nim	— ⚹	5 Nim	— ⚹	6 Nim	—Ш ⚹	4 Nim	— ⚹	6 Str	— Ш	5 Str	— —	7·0
0 —	— —	0 —	— —	2 Str	— Ш	2 Str	—Ш ⚹	2 Str	— —	2 Str	—Ш ⚹	5·5
0 —	— Ш	1 Str	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	2·1
1 Str	— Ψ	2 Str	— —	0 —	— —	0 —	— —	0 —	— —	0 —	— —	3·7
10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	9 Str	— —	8 Str	— Ш	8·2
10 Nim	— ⚹	10 Nim	— ⚹	9 Nim	— ⚹	10 Nim	— ⚹	6 Nim	— ⚹	7 Str	— —	7·8
9 Str	— —	9 Str	— —	Cir-s 7 Str	NW —◍ Ш	Cir-c 6 Str	NW — —	5 Str	— —	5 Str	— Ш	6·9
0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	2·7
2 Str	— Ш	2 Str	— —	0 —	— Ш	0 —	— Ш	1 Str	— Ш	1 Str	— Ш	3·6
3 Str	— Ш	Cir-s 9 Str	— ◍	3 Str	— Ш	3 Str	— Ш	5 Str	—Ψ Ш	6 Str	—Ψ Ш	3·9
4 Cum-s	— —	3 Str	— Ш	1 Str	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	4·8
10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Nim	— ⚹	10 Str	— —	10 Nim	— ⚹	7·2
1 Str	— —	1 Str	— Ш	3 Str	— —	Cum-s 9 Str	— —	9 Cum-s	— —	10 Cum-s	— —	7·2
10 Str	— —	10 Str	— —	10 Str	— —	10 Nim	— ⚹	10 Str	— —	10 Nim	— ⚹	6·8
9 Str	— —	9 Str	— —	10 Str	— —	10 Str	— —	9 Str	— Ш	9 Str	— ⚸	6·7
1 Str	— —	Cir-s 6 Str	— Ш	3 Str	— Ш	Cir-c 2 Str	ESE — Ш	1 Str	— Ш	1 Str	— Ш	5·6
10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— ⚸	10 Str	— ⚸	10 Str	— ⚸	4·7
1 Str	— Ш	1 Str	— Ш	1 Str	— Ш	1 Str	— Ш	0 —	— Ш	0 —	— Ш	3·8
0 —	— Ш	0 —	— Ш	0 —	— Ш	2 Str	— Ш	6 Str	— Ш	6 Str	— Ш	3·1
0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	0 —	— Ш	5·6
1 Str	— Ш	1 Str	— Ш	1 Str	— Ш	1 Str	— Ш	0 —	— Ш	0 —	— Ш	2·1
3·6		4·0		3·6		3·8		3·8		3·9		4·9

January 1883.

Day.	1		2		3		4		5		6	
1	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	⊔
2	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	2 Str	— ⊔
3	0 —	— ⊔	0 —	— ⊔	0 —	— —	0 —	— —	0 —	— ⊔	0 —	— ⊔
4	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— —
5	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— —	0 —	— —
6	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔
7	0 —	— ⊔	0 —	— —	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔
8	6 Str	— ⊔	6 Str	— ⊔	8 Str	— ⊔	7 Str	— ⊔	7 Str	— ⊔	4 Str	— ⊔
9	8 Str	— ⊔	8 Str	— ⊔	8 Str	— —	6 Str	— ⊔	5 Str	— ⊔	3 Str	— —
10	10 Str	— —	5 Str	— ⊔	7 Str	— —	6 Str	— —	6 Str	— —	8 Str	— —
11	8 Str	— —	6 Str	— —	8 Str	— —	10 Nim	— ⊹	10 Str	— —	10 Str	— —
12	2 Str	— ⊔	3 Str	— ⊔	3 Str	— ⊔	2 Str	— ⊔	1 Str	— —	0 —	— —
13	3 Str	— —	3 Str	— ⊔	5 Str	— ⊔	4 Str	— —	4 Str	— —	4 Str	— ⊔
14	3 Str	— —	3 Str	— ⊔	2 Str	— ⊔	0 —	— ⊔	0 —	— ⊔	1 Str	— ⊔
15	10 Nim	— ⊹	10 Str	— —	10 Str	— —	9 Str	— —	10 Nim	— ⊹ ⊹	10 Nim	— ⊹ ⊹
16	1 Str	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	2 Str	— ⊔	1 Str	— ⊔
17	0 —	— ⊔	6 Str	— ⊔	7 Str	— ⊔	4 Str	— ⊔	5 Str	— ⊔	5 Str	— ⊔
18	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	1 Str	— ⊔	0 —	— ⊔	0 —	— ⊔
19	6 Str	— ∪	10 Str	— —	10 Str	— —	9 Cum-s	— —	9 Cum-s	— —	10 Str	— —
20	1 Str	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔
21	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	1 Str	— ⊔
22	0 —	— —	1 Str	— —	1 Str	— —	1 Str	— ⊔	1 Str	— ⊔	1 Str	— ⊔
23	0 —	— ⊔	0 —	— ⊔	0 —	— —	0 —	— —	0 —	— —	0 —	— —
24	0 —	— ⊔	0 —	— —	0 —	— —	0 —	— —	0 —	— —	0 —	— ∪
25	1 Str	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	1 Str	— ⊔
26	9 Str	— —	9 Str	— —	9 Str	— —	10 Str	— —	10 Nim	— ⊹	10 Nim	— ⊹
27	7 Str	— ⊔	9 Str	— —	9 Str	— —	9 Str	— —	10 Str	— —	10 Str	— —
28	10 Str	— —	10 Str	— —	10 Cum-s	— —	10 Cum-s	— —	10 Str	— —	10 Str	— —
29	5 Str	— ⊔	7 Str	— —	Cum-s 6 Str	— —	4 Cum-s	— —	3 Str	— ⊔	1 Str	— ⊔
30	1 Str	— —	1 Str	— —	0 —	— —	0 —	— —	0 —	— —	0 —	— —
31	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— ⊔	0 —	— —	8 Cum-s	— —
Mean	3·2		3·2		3·2		3·0		3·0		3·1	

7			8			9			10			11			Noon.			Daily Amount of Downfall.
																		m.m.
0 —	—	—	1 Str	—	—	4 Str	—	—	2 Str	—	—	1 Str	—	—	0 —	—	—	—
0 —	—	⋓	2 Str	—	⋓	2 Str	—	Ψ	Cir-s 1 Str	NE —	—	1 Cir-s	—	—	1 Cir-s	ESE	—	—
0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	—
0 —	—	—	0 —	—	—	0 —	—	—	1 Str	E	—	0 —	—	○	0 —	—	—	—
0 —	—	—	1 —	—	—	1 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	—
0 —	—	⋓	0 —	—	⌴	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	—
1 Str	—	—	1 Cir-s	N	—	1 Cir-s	N	—	1 Cir-s	N	—	1 Cir-s	N	—	1 Cir-s	N	—	—
2 Str	—	⋓	7 Str	—	—	10 Str	—	⌴	9 Str	—	—	10 Str	—	—	10 Str	—	—	—
4 Str	—	—	6 Str	—	—	6 Str	—	—	Cir-s 5 Str	—	—	Cir-s 3 Str	—	—	Cir-s 3 Str	—	—	—
6 Str	—	⌴	8 Cum-s	—	—	4 Cir-s	NW	—	1 Cir-s	NW	—	1 Cir-s	NW	—	1 Cir-s	NW	—	—
10 Nim	—	⚹	10 Str	—	—	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	10 Nim	—	⚹	0·1
1 Str	—	—	1 Str	—	⌴	1 Str	—	—	1 Str	—	—	1 Str	—	—	0 —	—	—	—
3 Str	—	⌴	2 Str	—	—	Cir-s 2 Str	SSE —	—	Cir-s 3 Str	SSE —	—	3 Cir-s	SSE	—	3 Cir-s	SSE	—	—
1 Str	—	—	2 Str	—	⌴	4 Str	—	—	Cir-s 4 Str	SE —	—	Cir-s 2 Str	SE —	—	1 Cir-s	SE	—	—
10 Nim	—	⚹	10 Nim	—	⚹	10 Str	—	⚹	10 Str	—	⚹	10 Str	—	⚹	10 Str	—	⚹	2·5
1 Str	—	—	1 Str	—	—	7 Str	—	—	Cir-s 3 —	NW —	○	9 Cum-s	—	⚹	9 Cum-s	—	○ ⚹	2·0
2 Str	—	⋓	1 Str	—	—	1 Str	—	—	0 —	—	—	0 —	—	—	0 —	—	—	0·2
0 —	—	—	1 Str	—	—	Cir 3 Str	NW —	—	Cir 3 Str	NW —	—	Cir 3 Str	NW —	—	3 Str	—	—	—
10 Str	—	—	6 Str	—	—	3 Str	—	—	1 Cum-s	—	—	1 Cum-s	—	—	1 Cum-s	—	⚶	—
2 Str	—	⋓	1 Str	—	—	2 Str	—	—	2 Str	—	—	2 Str	—	○	2 Str	—	○	—
1 Str	—	—	3 Str	—	—	4 Str	—	—	Cir 4 Str	—	—	Cir 7 Str	—	—	Cir 8 Str	—	—	—
1 Str	—	—	2 Str	—	—	2 Str	—	—	2 Cir-s	NW	—	1 Cir-s	NW	—	1 Cir-s	NW	—	—
0 —	—	—	1 Str	—	—	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	—
1 Str	—	—	1 Str	—	—	Cir-s 2 Str	—	—	Cir-s 2 Str	—	—	Cir-s 3 Str	—	—	Cir-s 3 Str	—	—	—
4 Str	—	⋓	Cum-s 4 Str	—	—	Cir-s 3 Str	NE —	—	Cir-s 2 Str	NE —	—	2 Cir-s	N	—	Cir-c 5 Cum-s	N —	—	—
10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Nim	—	⚹	10 Nim	—	∞ ⚹	10 Nim	—	∞ ⚹	0·1
9 Str	—	—	9 Str	—	—	9 Str	—	—	10 Nim	—	⚹	10 Str	—	—	10 Str	—	—	—
10 Str	—	—	9 Str	—	—	9 Str	—	—	9 Str	—	—	10 Str	—	—	10 Str	—	—	—
1 Str	—	—	1 Str	—	—	1 Str	—	—	1 Cir-s	SSE	—	1 Cir-s	—	—	1 Cir-s	—	—	—
0 —	—	—	0 —	—	—	1 Str	—	—	1 Str	—	—	2 Str	—	—	4 Cum-s	—	—	—
2 Str	—	—	2 Str	—	—	Cum-s 7 Str	—	—	7 Cum-s	—	⚶	7 Cum-s	—	⚶	Cir-s 5 Cum	NW —	⚶	—
2·9			3·3			3·8			3·4			3·6			3·6			4·9

January 1883 *continued.*

Day.	1			2			3			4			5			6		
1	1 Cir-s	—	—	1 Cir-s	—	—	2 Str	—	—	4 Str	—	—	3 Str		—	1 Str	—	—
2	1 Cir-s	—	—	0 —	—	—	1 Cir-s	—	—	1 Cir-s	E	—	0 —	—	—	0 —	—	—
3	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—
4	0 —	—	—	0 —	—	○	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	⩊
5	0 —	—	—	0 —	—	—	Cir-s 1 Str	—	—	0 —	—	—	0 —	—	⩊	0 —	—	⩊
6	0 —	—	—	0 —	—	○	1 Cir-s	—	—	1 Cir-s	—	—	0 —	—	—	0 —	—	—
7	1 Cir-s	N	—	1 Cir-s	N	—	1 Cir-s	N	—	1 Cir-s	N	—	1 Str	—	⩊	1 Str	—	—
8	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	7 Str	—	—
9	3 Cir-s	NNW	—	2 Cir-s	NNW	—	Cir-s 2 Str	—	—	2 Str	—	—	1 Str	—	—	2 Str	—	—
10	2 Cir-s	N	—	1 Cir-s	N	○	2 Cir-s	N	—	Cir-s 3 Str	N —	—	6 Str	—	—	1 Str	—	—
11	10 Nim	—	⚹	10 Nim	—	⚹	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—
12	0 —	—	—	3 Str	—	—	Cir-s 3 Str	—	—	Cir-s 2 Str	—	—	2 Str	—	—	1 Str	—	—
13	Cir 3 Cir-s	SE	—	Cir 5 Cir-s	SE	—	7 Cir-s	SE	—	Cir-s 5 Str	E —	—	5 Str	—	—	Cir-s 4 Str	SE —	—
14	1 Cir-s	SE	—	1 Str	—	—	2 Str	—	—	2 Str	—	—	2 Str	—	—	1 Str	—	—
15	10 Str	—	⸸	8 Cum-s	—	⸸	Cum-s 8 Str	—	—	3 Str	—	—	1 Str	—	—	1 Str	—	—
16	Cir-s 4 Str	NW —	○	2 Cir-s	NW	—	3 Cir-s	NW	—	5 Str	—	—	4 Str	—	—	5 Str	—	—
17	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—
18	Cir 3 Str	NW —	—	Cir 5 Str	NW —	—	Cir 5 Str	NW —	—	6 Str	—	—	7 Str	—	—	8 Cum-s	—	—
19	1 Cir-s	SW	⸸	2 Cir-s	NW	⸸	Cir-s 2 Str	NW —	⸸	2 Str	—	⸸	2 Str	—	—	0 —	—	—
20	1 Str	—	—	Cir-s 1 Str	—	—	Cir-s 1 Str	—	—	2 Str	—	—	2 Str	—	—	3 Nim	—	⚹
21	Cir-c 7 Str	—	—	Cir-s 8 Str	—	—	Cir 6 Str	NNW —	—	4 Str	—	—	1 Str	—	—	0 —	—	—
22	1 Cir-s	NW	—	1 Cir-s	NW	—	2 Cir-s	NW	—	2 Cir-s	NW	—	2 Str	—	—	Cir-c 2 Str	—	—
23	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—
24	Cir-s 3 Str	—	—	Cir-s 3 Str	—	—	Cir-s 3 Str	—	—	Cir 3 Str	—	—	1 Str	—	—	1 Str	—	⩊
25	7 Cum-s	—	—	Cir-s 9 Cum-s	—	—	9 Str	—	—	10 Nim	—	⚹	10 Nim	—	⚹	10 Str	—	—
26	10 Nim	—	⚹	9 Nim	—	⚹	Cum-s 9 Nim	—	⚹	Cum-s 7 Str	—	—	9 Str		—	5 Nim	—	⚹
27	10 Str	—	—	10 Str	—	—	10 Nim	—	⚹	10 Nim	—	—	10 Nim		—	10 Nim	—	⚹
28	9 Str	—	—	9 Nim	—	⚹	8 Nim	—	⚹	10 Str	—	—	8 Str	—	—	9 Str	—	—
29	Cir-s 1 Str	—	—	Cir, Cir-s 2 Str	SW —	—	Cir-s 2 Str	NW —	—	Cir-c 7 Str	NW —	—	Cum-s 7 Str	—	—	3 Str	—	—
30	4 Cum-s	—	—	3 Cum-s	—	—	2 Str	—	—	1 Str	—	—	1 Str	—	—	1 Str	—	⩊
31	3 Cir-s	NW	⸸	2 Cir-s	NW	⸸	3 Cir-s	NW	⸸	10 Str	—	—	3 Str	—	—	1 Str	—	⩊
Mean	3·5			3·5			3·7			4·0			3·5			2·8		

Sums of Hydrometeors: 41 ⚹, 6 ⌴, 23 ⸸.

7		8		9		10		11		Midnight		Mean Daily Amount of Cloud.
0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0·8
0 —	— —	0 —	— —	0 —	— —	0 —	— —	0 —	— —	0 —	—	0·5
0 —	— —	0 —	—	0 —	— —	0 —	— —	0 —	— —	0	—	0·0
0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0·0
0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0·1
0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0·1
0 —	—	0 —	—	0 —	—	0 —	—	4 Str	—	5 Str	—	0·9
7 Str	—	7 Str	— —	8 Str	— —	8 Str	— —	8 Str	— —	8 Str	— —	7·9
4 Str	— —	3 Str	— —	3 Str	—	4 Str	—	9 Str	—	9 Str	—	4·5
2 Str	— —	5 Str	— —	8 Nim	—	9 Nim	—	9 Nim	—	8 Cum-s	— —	5·0
9 Str	— —	8 Str	— —	9 Str	— —	8 Str	—	2 Str	—	2 Str	—	8·7
2 Str	— —	4 Str	— —	5 Str	— —	4 Str	—	2 Str	— —	3 Str	— —	2·0
Cir-s 2 Str	SE — —	2 Str	—	1 Str	— —	1 Str	— —	2 Str	— —	2 Str	—	3·2
3 Str	— —	3 Str	—	4 Str	— —	9 Str	— —	10 Str	— —	10 Str	— —	3·0
1 Str	— —	0 —	— —	0 —	— —	0 —	—	0 —	—	0 —	—	6·3
8 Str	—	9 Str	—	5 Str	—	5 Str	—	5 Str	—	0 —	—	3·7
0 —	— —	0 —	— —	0 —	—	0 —	—	0 —	—	0 —	—	1·3
Cum 8 Str	NW —	9 Cum-s	NW —	Cum-s 9 Str	— —	9 Str	—	Cum-s 8 Str	— —	Cir-s 9 Str	SW — —	4·2
1 Str	— —	0 —	—	0	— —	0 —	— —	3 Str	—	3 Str	—	3·8
0 —	—	0 —	—	0	—	0 —	—	0 —	—	0 —	—	0·9
0 —	— —	0 —	— —	0 —	— —	0 —	— —	0 —	— —	0 —	— —	2·2
10 Cum-s	— —	Cir-s 4 Str	SE —	3 Str	— —	2 Str	— —	0 —	— —	0 —	—	1·8
0 —	— —	0 —	— —	0 —	— —	0 —	— —	0 —	— —	0 —	— —	0·0
1 Str	— —	8 Cum-s	— —	9 Str	— —	9 Str	— —	3 Str	— —	1 Str	—	2·4
6 Str	— —	9 Str	—	10 Nim	—	10 Str	— —	10 Nim	—	10 Nim	—	5·5
4 Str	—	3 Str	—	6 Str	—	Cir 3 Str	—	3 Str	—	4 Str	—	7·9
10 Nim	—	10 Nim	—	10 Nim	—	10 Str	— —	10 Str	— —	10 Nim	—	9·6
10 Str	— —	9 Str	— —	7 Str	—	2 Str	—	3 Str	—	3 Str	—	8·5
4 Str	— —	7 Str	— —	10 Str	— —	10 Str	— —	0 —	—	0 —	—	3·5
0 —	—	0 —	—	0 —	—	0 —	—	2 Str	—	0 —	—	1·0
0 —	—	0 —	—	0 —	—	0 —	-	0 —	—	0 —	—	2·5
3·0		3·2		3·5		3·3		3·0		3·0		3·3

February 1883.

Day.	1		2		3		4		5		6	
1	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—
2	4 Str	—	4 Str	—	4 Str	—	4 Str	—	3 Str	—	3 Str	—
3	8 Str	—	10 Nim	—	10 Nim	—	4 Str	—	4 Str	—	3 Str	—
4	7 Str	—	7 Str	—	3 Str	—	5 Str	—	2 Str	—	3 Str	—
5	2 Str	—	2 Str	—	0 —	—	4 Str	—	8 Str	—	10 Str	—
6	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—
7	6 Cum-s	—	7 Nim	—	10 Nim	—	5 Str	—	10 Nim	—	2 Str	—
8	10 Str	—	10 Str	—	10 Nim	—	10 Nim	—	7 Nim	—	2 Nim	—
9	6 Str	—	1 Str	—	2 Str	—	0 —	—	1 Str	—	6 Str	—
10	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—
11	7 Str	—	7 Str	—	5 Str	—	6 Str	—	7 Str	—	4 Str	—
12	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—
13	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—
14	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	2 Str	—
15	1 Str	—	1 Str	—	3 Str	—	2 Str	—	0 —	—	2 Str	—
16	4 Str	—	2 Str	—	0 —	—	0 —	—	0 —	—	0 —	—
17	1 Str	—	1 Str	—	1 Str	—	Cir-s 3 Str	NW —	3 Str	—	4 Str	—
18	10 Str	—	10 Str	—	5 Str	—	8 Str	—	9 Str	—	9 Str	—
19	1 Str	—	1 Str	—	2 Str	—	1 Str	—	2 Str	—	10 Str	—
20	0 —	—	0 —	—	1 Str	—	Cir-c 6 Str	NW —	8 Cum-s	—	2 Str	—
21	2 Str	—	2 Str	—	3 Str	—	4 Str	—	7 Str	—	7 Str	—
22	3 Str	—	2 Str	—	2 Str	—	3 Str	—	4 Cum-s	—	10 Str	—
23	Cir-c 4 Str	N —	10 Str	—	10 Str	—	10 Str	—	10 Str	—	10 Str	—
24	2 Str	—	2 Str	—	2 Str	—	2 Str	—	2 Str	—	3 Str	—
25	10 Nim	—	10 Nim	—	9 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—
26	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—	10 Str	—
27	10 Str	—	10 Str	—	10 Str	—	10 Str	—	10 Nim	—	10 Nim	—
28	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—	10 Nim	—
Means -	4·2		4·2		4·0		4·2		4·5		4·7	

7			8			9			10			11			Noon.			Daily Amount of Downfall.
																		m.m.
0	—	— —	0	—	— —	0	—	— —	1 Cir-s	ENE	—	1 Cir-s	ESE	—	1 Cir-s	S	○	—
3 Str		— —	2 Str		— —	1 Str		— —	0	—	— —	0	—	— —	0	—	— —	—
2 Str		— ⊣	2 Str		— ⊣	1 Str		— —	0	—	— —	1 Cir-s	N	—	1 Cir-s	N	—	0·5
6 Str		— —	10 Str		— —	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	0·1
10 Str		— ⊣	10 Str		— ⊣	10 Str		— ⊣	7 Cum-s		— ⊣	9 Cum-s		— ⊣	9 Cum-s		— ⊣	3·6
2 Str		— —	3 Cir-s		— —	6 Cir-s		— —	9 Cir-s	NW	—	10 Str		— —	10 Str		— —	0·6
8 Str		— ⊣	7 Str		— ⊣	Cir-s 3 Str	NW	— ⊣	Cir-s 2 Str	NW	— ⊣	Cir-s 2 Str	NW	— ⊣	Cir-s 2 Str	NW	— ⊣	1·5
6 Str		— —	7 Str		— —	9 Str		— —	10 Str		— —	10 Cum-s		— —	10 Nim		— ⚹	—
5 Str		— —	10 Nim		— ⚹	8 Nim		— ⚹	9 Nim		— ⚹	10 Nim		— ⚹	9 Nim		— ⚹	1·3
1 Str		— —	4 Str		— —	Cir, Cir-s 5 Str	SE	— —	9 Str		— —	10 Str		— —	9 Str		— —	1·8
10 Str		— —	9 Str		— —	10 Str		— —	10 Str		— ⁄	5 Str		— —	4 Cum-s		— —	1·5
2 Str		— —	4 Str		— —	Cir-c 5 Cir-s	NW	—	5 Cir-s	NW	—	7 Cir-s	NW	—	5 Cir-s	NW	—	—
0	—	— ⌊	0	—	— —	0	—	— Mirage	0	—	— —	0	—	— —	0	—	— —	—
2 Str		— —	3 Str		— —	3 Str		— —	2 Str		— —	3 Str		— —	3 Str		— —	—
1 Str		— —	1 Str		— —	1 Str		— —	0	—	— —	1 Cir-s	N	—	1 Cir-s	N	—	0·1
1 Str		— —	1 Str		— —	3 Cir-s	N	—	1 Cir-s	SE	—	3 Cir-s	N	—	4 Cir-s	N	—	—
6 Str		— —	7 Str		— —	1 Str		— —	6 Str		— —	9 Cum-s		— —	7 Cum-s		— —	—
6 Str		— —	3 Cir-s		— —	2 Cir-s	E	—	2 Cir-s	E	—	3 Cir-s	N	—	Cir-s 7 Cum-s	NW	— —	—
10 Str		— —	Cum-s 9 Str		— —	1 Str		— —	1 Str		— —	1 Str		— —	0	—	— —	—
2 Str		— —	2 Str		— —	1 Str		— —	0	—	— —	0	—	— —	0	—	— —	—
8 Str		—	8 Str		— —	Cir-c 6 Cir-s	N	— —	Cir-c 3 Cir-s	N	— —	Cir-s 2 Cum		— —	2 Cir-s		— —	—
10 Str		— ⌊	10 Str		— —	10 Str		— —	Cir-s 6 Str	N	— —	Cir-s 5 Str	NW	— —	Cir-s 5 Str	NW	— —	—
10 Str		— —	10 Str		— —	10 Str		— —	8 Cum-s		— —	3 Str		— —	2 Str		— —	—
4 Str		— —	5 Cir-s		— —	4 Cir-s		— —	4 Cir-s	N	—	2 Cir-s	N	—	3 Cir-s	N	—	—
10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	0·6
10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	2·0
10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	9 Nim		— ⚹	1·5
10 Nim		— ⚹	10 Nim		— ⚹	10 Nim		— ⚹	9 Nim		— ⚹	Cum-s 9 Str		— —	Cir-c 7 Str	NW	— —	4·1
5·5			6·0			5·5			5·1			5·2			5·0			19·2

February 1883—*continued.*

Day.	1	2	3	4	5	6
1	2 Cir-s — —	2 Cir-s — —	2 Cir-s — ○	9 Str — —	10 Str — —	3 Str — —
2	0 — — —	3 Str — —	6 Str — —	6 Str — —	5 Str — —	7 Str — —
3	1 Cir-s N —	3 Cir-s N —	2 Cir-s N —	3 Cir-s N —	2 Str — —	2 Str — —
4	Cir-s NW 5 Cum-s — ⊣	10 Str — ⊣	10 Str — ⊣	Cum-s 5 Str — ⊣	Cum-s 9 Str — ⊣	8 Str — ⊔ ⊣
5	10 Nim — ✳ ⊣	4 Cum-s — ⊣	3 Cum-s — ⊣	4 Cum-s — —	10 Nim — ⊣ ✳	4 Cum-s — ⊣
6	10 Str — —	10 Nim — ✳	10 Nim — ✳	10 Nim NW ✳	5 Str NW —	3 Nim — ✳
7	2 Cir-s NW —	1 Cir-s NW —	1 Cir-s SW —	1 Cir-s NW —	1 Str — —	1 Str — —
8	10 Nim — ✳	10 Nim — ✳	10 Nim — ✳	9 Cum-s — —	8 Str — —	10 Str — —
9	10 Nim — ✳	10 Nim — ✳	10 Nim — ✳	9 Nim — ⊣ ✳	7 Str — ⊣	4 Str — ⊣ ⊔
10	10 Str — —	10 Str — —	10 Str — —	10 Nim — ✳	10 Nim — ✳	10 Nim — ✳
11	4 Cum-s — —	7 Cum-s — —	7 Cum-s — —	9 Cum-s — ⊣	8 Cum-s — —	3 Cum-s — —
12	3 Cir-s NW —	2 Cir-s — —	3 Cir-s — —	6 Cir-s N —	4 Str — —	9 Str — ⊔
13	0 — — —	0 — — —	0 — — —	1 Cir-s SE, N —	1 Str — —	1 Str — —
14	Cir-s 3 Str — —	Cir-s 3 Str — —	Cir-s 3 Str — —	Cir-s 3 Str — —	3 Str — —	3 Str — —
15	2 Cir-s SW —	3 Cir-s SW —	3 Cir-s SW —	Cir-s SW 2 Str — ○	2 Str — —	1 Str — —
16	Cir-s, Cir-c NW 4 Str — —	Cir 3 Cir-s NW ⊣	Cir-s NW 7 Str — ⊣ ○	Cir-s N 4 Str — ⊣ ○	3 Str — ⊣	Cum-s 4 Str — ⊣
17	8 Str — —	8 Cum-s — —	7 Cum-s — —	9 Cum-s — —	6 Cum-s — —	7 Cum-s — —
18	Cum-s 9 Str — —	9 Str — —	Cir-s 8 Cum-s — —	9 Cum-s — —	6 Str — —	3 Str — —
19	0 — — —	1 Cir-s NW —	1 Str — —	Cir 1 Cir-s NW —	Cir-s NW 3 Str — —	2 Str — —
20	0 — — —	0 — — —	0 — — —	0 — — —	1 Str — —	5 Str — —
21	2 Cir-s — —	3 Cir-s — —	Cir-s 7 Cum-s — —	9 Cum-s — —	10 Str — —	10 Str — —
22	10 Str — —	10 Str — —	10 Str — —	9 Str — —	10 Str — —	10 Str — —
23	1 Str — —	1 Str — —	1 Str — —	1 Str — —	1 Str — —	1 Str — —
24	3 Cir-s N ○	2 Cir-s N —	3 Cir-s N —	8 Cir-s N —	10 Str — —	9 Str — —
25	10 Nim — ✳	10 Str — —	10 Str — —	10 Nim — ✳	10 Nim — ✳	9 Nim — ✳
26	10 Cum-s — ⊣	10 Cum-s — ⊣	10 Cum-s — ⊣	10 Nim — ⊣ ✳	10 Nim — ⊣ ✳	10 Nim — ⊣ ✳
27	9 Nim — —	9 Nim — ✳	10 Nim — ✳	10 Nim — ✳	10 Nim — ✳	10 Nim — ✳
28	Cir-s NW 7 Str — —	Cum-s 9 Str — —	Cum-s 9 Str — —	Cum-s 9 Str — —	8 Cum-s — —	9 Cum-s — —
Mean	5·2	5·4	5·8	6·3	6·2	5·6

Sums of Hydrometeors: 119 ✳, 3 ⊔, 67 ⊣.

February 1883—*continued.*

7	8	9	10	11	Midnight.	Mean Daily Amount of Cloud.
4 Str —	5 Str —	5 Str —	5 Str —	2 Str —	1 Str —	2·2
9 Str — —	7 Str — —	7 Str —	10 Str — —	10 Str — —	10 Nim —	4·5
2 Str —	2 Str —	2 Str —	0 — —	6 Str —	7 Str — —	3·2
10 Nim —	9 Str —	10 Nim —	10 Nim —	10 Nim —	7 Str —	7·7
3 Str —	1 Str —	0 — —	0 — —	0 — —	0 — —	5·0
9 Nim —	9 Str — —	10 Nim —	10 Nim —	9 Str — —	5 Str — —	5·8
3 Str —	3 Str —	4 Str —	7 Str — —	9 Str — —	10 Str — —	4·5
1 Str —	5 Nim —	9 Nim —	6 Str —	10 Nim —	10 Str —	8·3
1 Str —	1 Str —	0 — —	0 — —	0 — —	0 — —	5·0
8 Nim —	10 Nim —	9 Nim —	10 Nim —	9 Str — —	8 Str — —	6·3
0 — — —	5 Str — —	0 — —	0 — —	0 — —	0 — —	5·3
7 Str —	6 Str —	2 Str — —	0 — — —	1 Str — —	1 Str — —	3·0
0 — — —	0 — — —	0 — — —	0 — — —	0 — —	0 — —	0·1
0 — —	0 — — —	1 Str — —	1 Str — —	5 Nim —	1 Nim —	1·8
Cir-s NW 4 Str —	2 Str —	0 — —	4 Str — —	4 Str —	4 Str — —	1·9
4 Cum-s — —	8 Cum-s — —	10 Cum s — —	6 Str — —	4 Str —	2 Str —	3·2
5 Cum-s — —	5 Cum-s — —	1 Str — —	4 Cum-s — —	3 Str — —	Cum-s 9 Str —	5·2
2 Str — —	2 Str — —	1 Str —	Cum-s 7 Str —	3 Str — —	3 Str —	5·7
2 Str — —	2 Str — —	3 Str — —	3 Str — —	3 Str —	1 Str —	2·5
2 Str — —	1 Str — —	0 — — —	0 — — —	0 — — —	1 Str —	1·3
10 Str — —	10 Str — —	Cum-s 8 Str — —	2 Str —	2 Str —	4 Str —	5·5
10 Str — —	10 Str — —	9 Cum-s — —	9 Cum-s — —	7 Nim —	6 Str —	7·5
1 Str —	0 — —	0 — —	0 — —	0 — —	0 — —	4·3
6 Str —	2 Str — —	4 Str —	10 Nim —	10 Nim —	10 Nim —	4·7
10 Nim —	10 Nim —	10 Nim —	10 Nim —	10 Nim —	10 Nim —	9·9
4 Str —	8 Str —	9 Str —	4 Str —	4 Str —	6 Str —	9·0
10 Nim —	10 Nim —	9 Nim —	8 Nim —	9 Str —	10 Nim —	9·7
7 Cir-s —	4 Str —	1 Str —	0 — —	0 — —	0 — —	7·5
4·8	4·9	4·4	4·5	4·6	4·5	5·0

March 1883.

Day.	1	2	3	4	5	6
1	0 — —	0 — —	0 — —	1 Str —	1 Str —	3 Str —
2	4 Str —	3 Str —	4 Str —	2 Str —	1 Str —	3 Str — —
3	0 — —	0 — —	0 — —	0 — —	0 — —	2 Str — —
4	0 — —	0 — —	0 — —	0 — —	0 — —	1 Str — —
5	0 — —	0 — —	0 — —	0 — —	0 — —	0 — — —
6	0 — —	0 — —	0 — —	0 — —	2 Str —	2 Str —
7	2 Str —	2 Str —	2 Str —	2 Str —	9 Str —	10 Str — —
8	4 Str —	Cum-s 9 Str —	10 Str — —	10 Str — —	10 Str — —	8 Cum-s — —
9	4 Str —	4 Str —	0 — —	2 Str —	1 Str — —	3 Str — —
10	0 — —	0 — —	4 Str —	8 Str — —	8 — — —	9 Str — —
11	3 Cum-s —	1 Str —	0 — —	0 — —	3 Str — —	Cir, Cir-s 3 Str — —
12	7 Cum-s — —	10 Str — —	10 Str — —	10 Str — —	8 Str — —	10 Str — —
13	10 Nim —	10 Nim —	10 Str —	6 Str —	6 Str —	2 Str —
14	0 — —	0 — —	0 — —	0 — —	0 — —	0 — — —
15	1 Str —	1 Str —	1 Str — —	1 Str —	4 Str — —	9 Cum-s — —
16	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Cum-s — —	Cum-s 9 Str — —
17	2 Str —	0 — —	0 — —	0 — —	0 — —	0 — — —
18	0 — — —	0 — — —	0 — —	0 — —	0 — —	0 — — —
19	2 Str —	4 Str —	3 Str —	4 Str —	9 Str —	Cir-s 6 Str — —
20	10 Nim —	10 Nim —	7 Str — —	9 Str — —	10 Str — —	10 Nim —
21	6 Cum-s — —	5 Cum-s —	4 Str —	1 Str —	1 Str — —	1 Str — —
22	1 Str —	1 Str —	1 Str —	7 Cum-s —	Cum-s 4 Str — —	10 Str — Mirage
23	0 — —	0 — —	0 — —	0 — —	0 — —	0 — — —
24	0 — — —	0 — — —	0 — — —	0 — —	0 — —	0 — — —
25	0 — —	0 — —	0 — —	0 — —	0 — —	0 — — —
26	0 — —	0 — —	0 — —	1 Str —	1 Str — —	Cir-s 5 Str — —
27	0 — —	1 Str —	1 Str —	1 Str —	1 Str — —	1 Str — —
28	0 — —	0 — —	0 — —	0 — —	0 — —	0 — — —
29	1 Str —	1 Str —	2 Str —	2 Str — —	2 Str — —	1 Str — —
30	0 — —	0 — —	0 — —	0 — —	0 — —	0 — — —
31	0 — —	0 — —	0 — —	1 Str —	1 Str — —	1 Str — —
Mean	2·2	2·3	2·2	2·5	3·0	3·5

7	8	9	10	11	Noon.	Daily Amount of Downfall.
						m.m.
3 Str — —	2 Str — —	3 Str — —	3 Cir-s — —	3 Cir-s — —	3 Cir-s — —	—
7 Str — —	4 Cir-s NE —	4 Cir-s N —	2 Cir-s N —	2 Cir-s N —	6 Cir-s N —	—
3 Str — —	2 Str — —	3 Cir-s NW —	2 Cir-s NW —	2 Cir-s NW —	2 Cir-s NW —	—
2 Str — —	2 Cir-s — —	1 Cir-s — —	0 — — —	0 — — —	0 — — —	—
0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	—
0 — — ⊹	2 Cir-s NE ○	Cir-s, Cir-c NE 4 Str — ⊹	10 Str — ⊹	4 Str — ○ ⊹	Cir-s E 5 Str — ⊹	—
10 Str — —	9 Str — —	7 Cum-s — —	5 Str — —	Cir-s SSE 4 Str — —	2 Str — —	—
6 Cum-s — —	2 Cir-s N —	2 Cum-s — —	2 Cum-s — —	2 Cum-s — —	1 Cum — —	—
2 Str — —	3 Cir-s E —	5 Cir-s ESE —	4 Cir-s NW —	6 Cir-s — —	7 Cir-s NW —	—
7 Str — —	9 Str — —	9 Str — ⊹	10 Str — ⊹	10 Str — ⊹	Cir-s 10 Str — ⊹	—
7 Cum-s — —	8 Nim — ⊹ ⚹	Cum 7 Nim — ⚹	9 Cum-s — —	10 Str — —	9 Str — —	0·1
10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Cum-s — —	—
2 Str — —	1 Str — ○	1 Str — —	1 Str — —	Cir-s 1 Str — —	0 — — ⊹	0·5
0 — — —	1 Str — —	1 Cir-s SW —	1 Cir-s NW —	2 Cir-s — —	2 Cir-s — —	—
9 Cum-s — —	10 Str — —	10 Str — ○	5 Cir-s NW ○	Cir-s, Cir-c NW 6 Str — —	Cir-s, Cir-c NW 8 Str — —	—
9 Str — —	9 Str — —	8 Str — —	8 Cum-s — —	7 Cum-s — —	Cir-s W 7 Str — —	—
0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	—
0 — — —	0 — — —	1 Cir-s WNW —	6 Cir-s NW —	3 Cir-s NNW —	6 Cir-s NNW —	—
Cir-s 8 Str — —	7 Str — —	7 Str — —	Cir-s 5 Cum-s — —	4 Cir-s — —	8 Cir-s — ○	—
10 Nim — ⚹	10 Nim — ⚹	8 Cum-s — —	4 Cum-s — —	1 Cum-s — —	1 Cir-s NW —	0·3
1 Str — —	Cir-s NW 5 Str — —	1 Cir-s — —	0 — — —	0 — — —	0 — — —	—
7 Cum-s — —	7 Cum-s — —	5 Cum-s — —	3 Str — —	1 Str — —	1 Str — —	—
0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	—
0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	—
0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	—
6 Cir-s SE —	Cir NW 6 Cir-s — —	Cir NW 6 Cir-s — —	Cir NW 6 Cir-s — —	3 Cir-s — —	3 Cir-s — —	—
0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	—
0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	0 — — —	—
2 Str — ⌊	1 Str· — —	1 Cir-s — —	2 Cir-s — —	2 Cir-s — —	2 Cir-s — —	—
1 Str — —	0 — — —	1 Cir-s ESE —	1 Str — —	1 Str — —	0 — — —	—
1 Cir-s — —	1 Cir-s — —	1 Cir-s — —	1 Cir-s — —	1 Cir-s — —	1 Cir-s — —	—
3·6	3·6	3·4	3·2	2·5	3·0	0·9

March 1883—*continued.*

Day.	1		2		3		4		5		6	
1	3 Cir-s	— —	6 Cir-s	NE Mirage	6 Cir-s	— —	Cir-s 8 Str	N ○	6 Str	— —	5 Str	— —
2	Cir-s 5 Cum	N — —	Cir-s 4 Cum	N — —	5 Cir-s	N —	8 Cir-s	N ○	9 Cir-s	— —	10 Str	— —
3	3 Cir-s	NW —	2 Cir-s	NW —	2 Cir-s	NW —	Cir-s 3 Str	NW — —	Cir-s 3 Str	NW — —	3 Str	— —
4	o —	— —	o —	— —	o —	— —	o —	— —	o —	— —	o —	— —
5	o —	— —	o —	— —	o —	— —	o —	— —	o —	— —	1 Str	— —
6	4 Cir-s	E ⊹	10 Str	— ⊹	Cum-s 9 Str	— ⊹	Cir-s 4 Str	E — —	Cum-s 8 Str	— —	10 Str	— —
7	3 Cir-s	WSW —	4 Cir-s	WSW —	8 Cum-s	— —	9 Cum-s	— —	9 Str	— ○	7 Str	— —
8	1 Cum	— —	Cir-s 1 Cum	NW — —	1 Cir-s	NW —	1 Cir-s	NW —	2 Cir-s	NW —	2 Str	— —
9	8 Cir-s	— —	6 Cir-s	— —	6 Cir-s	SW —	6 Cir-s	SW —	Cir-s 7 Str	SE — —	3 Str	— —
10	Cir 9 Str	WNW — ⊹	Cir, Cir-s 8 Str	WNW — —	Cir 8 Cum-s	WNW — —	Cir 9 Cum-s, Str	WNW — —	Cir 9 Str	WNW — —	Cir-s, Cir-s 9 Str	WNW — —
11	9 Cum-s	— —	8 Cum-s	— —	9 Cum-s	— —	10 Str	— —	8 Cum-s	— —	4 Str	— —
12	10 Str	— —	10 Cum-s	— —	Cir-s 5 Cum-s	SE — —	9 Cum-s	— —	9 Cum-s	— —	Cum-s 9 Str	— —
13	Cum 2 Cum-s	— ⊹	Cum 3 Cum-s	— ⊹	4 Cum-s	— ⊹	9 Cum-s	— ⊹	8 Cum-s	— ⊹	9 Str	— ⊹
14	4 Cir-s	— —	5 Cir-s	NW —	5 Cir-s	NW —	2 Cir-s	NW —	1 Cir-s	— —	2 Cir-s	— —
15	9 Cum-s	— —	Cir-s 9 Cum	— —	Cum 9 Cum-s	— —	10 Str	— —	10 Cum-s	— —	10 Str	— —
16	Cir-s 7 Str	W — —	Cir 5 Str	WNW — —	Cir 5 Str	WNW — —	Cir-s 4 Str	WNW — —	Cir-s 4 Str	WNW — —	5 Str	— ○
17	o —	— —	o —	— —	o —	— —	o —	— —	o	— —	o —	— —
18	6 Cir-s	NNW —	2 Cir-s	N —	4 Cir	NNW —	Cir 4 Cir-s	— N	2 Cir-s	NE —	1 Cir-s	S —
19	Cir-s 8 Cum-s	— ○	Cir-s 6 Cum-s	— —	Cir 8 Str	— —	10 Str	— —	Cir 10 Str	— ○	10 Str	— —
20	1 Cir-s	— —	1 Cir-s	NW —	1 Cir-s	— ⊹	1 Str	— —	2 Str	— —	2 Str	— —
21	o —	— —	o —	— —	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —	1 Str	— —
22	1 Str	— —	1 Str	— —	6 Cum-s	— —	3 Cum-s	— —	1 Str	— —	1 Str	— —
23	o —	— —	o —	— —	o —	— —	o —	— —	o —	— —	o —	— —
24	o —	— —	o —	— —	o —	— —	o —	— —	o —	— —	o —	— —
25	o —	— —	o —	— —	o —	— —	o —	— —	o —	— —	o —	— —
26	4 Cir-s	— —	4 Cir-s	N —	4 Cir-s	— —	3 Cir-s	— —	Cir 3 Cir-s	N — —	Cir-s, Cir 4 Str	N — —
27	o —	— —	o —	— —	o —	— —	o —	— —	o —	— —	1 Cir-s	— —
28	o —	— —	o —	— —	o —	— —	o —	— —	1 Str	— —	1 Str	— —
29	2 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —
30	o —	— —	o —	— —	o —	— —	o —	— —	o —	— —	o —	— —
31	1 Cir-s	— —	o —	— —	o —	— —	o —	— —	1 Str	— —	2 Str	— —
Mean	3·2		3·1		3·5		3·7		3·7		3·7	

Sums of Hydrometeors: 10 ✳, 10 ⌐, 33 ⊹.

March 1883—*continued.*

7		8		9		10		11		Midnight.		Mean Daily Amount of Cloud.
3 Str	—	4 Str	—	2 Str	—	0 —	—	1 Str	—	2 Str	—	2·8
4 Str	—	3 Str	—	3 Str	—	3 Str	—	0 —	—	0 —	—	4·0
3 Str	—	3 Str	—	2 Str	—	2 Str	—	0 —	—	0 —	—	1·7
0 —	—	0 —	—	0 —	—	0 —	—	0 —	— —	0 —	— —	0·2
1 Str	— —	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0·1
7 Str	— —	8 Str	— —	7 Str	—	7 Str	—	5 Str	—	4 Str	—	4·7
7 Str	—	4 Cum-s	—	2 Str	—	0 —	—	0 —	—	2 Str	—	5·0
2 Str	—	1 Str	—	2 Str	—	2 Str	—	3 Str	—	4 Str	—	3·7
4 Str	—	3 Str	—	3 Str	—	2 Str	—	0 —	—	0 —	—	3·7
8 Str	— —	2 Str	— —	4 Str	— —	1 Str	—	2 Str	—	Cum-s 9 Str	—	6·7
Cum-s 8 Str	— —	3 Cum-s	— —	0 —	— —	1 Str	— —	1 Str	—	3 Str	—	5·2
Cum-s 9 Str	— —	9 Str	— —	8 Str	—	8 Str	—	10 Str	— —	10 Nim	—	9·2
10 Str	—	10 Str	—	1 Str	—	2 Str	—	2 Str	—	0 —	—	4·6
1 Str	— —	1 Str	—	0 —	—	1 Str	—	1 Str	—	1 Str	—	1·3
8 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Str	— —	7·5
7 Str	— —	3 Str	—	1 Str	—	3 Str	—	4 Str	— —	4 Str	—	6·6
1 Str	— —	0 —	— —	0 —	—	0 —	—	0 —	— —	0 —	—	1·2
1 Str	— —	1 Str	— —	0 —	—	0 —	— —	1 Str	—	1 Str	—	1·6
10 Str	— —	10 Str	— —	10 Str	— —	9 Str	—	8 Str	—	9 Str	—	7·3
2 Str	— —	9 Cum-s	—	10 Str	— —	10 Str	— —	9 Cum-s	— —	9 Cum-s	— —	6·1
1 Str	— —	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	1·2
1 Str	— —	1 Str	—	1 Str	—	0 —	—	0 —	—	0 —	—	2·7
0 —	— —	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0·0
0 —	— —	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0·0
1 Str	— —	1 Str	—	0 —	—	0 —	—	0 —	—	0 —	—	0·1
Cir 3 Str	N —	1 Str	—	1 Str	—	1 Str	— —	0 —	—	0 —	—	2·7
0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0 —	—	0·2
1 Str	— —	1 Str	—	1 Str	—	1 Str	—	1 Str	—	1 Str	—	0·3
1 Str	— —	1 Str	—	0	—	0 —	—	0 —	—	0 —	—	1·2
0 —	— —	0 —	—	0 —	— —	0 —	— —	0 —	—	0 —	—	0·2
2 Str	— —	2 Str	— —	1 Str	— —	0 —	—	1 Str	—	4 Str	—	1·0
3·4		2·9		2·2		2·0		1·9		2·4		3·0

April 1883.

Days.	1	2	3	4	5	6
1	9 Str — —	10 Str — —	10 Str — —	10 Str — —	9 Str — —	8 Cum-s — —
2	5 Str — —	5 Str — —	3 Str — —	8 Str — —	10 Str — —	10 Str — —
3	9 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	Cum-s 9 Str — —
4	0 — — — —	0 — — — —	0 — — — —	0 — — — —	0 — — — —	1 Str — —
5	0 — — — —	0 — — — —	0 — — — —	1 Str — ⌊	1 Str — —	1 Str — —
6	3 Nim — ⚹	5 Nim — ⚹	10 Nim — ⚹	10 Str — —	10 Str — —	10 Cum-s — —
7	0 — — — —	1 Str — —	6 Str — —	4 Str — —	4 Str — —	Cir-c 4 Str — —
8	3 Str — —	5 Str — —	8 Str — —	8 Str — —	7 Str — —	8 Cum-s — —
9	6 Str — —	7 Nim — ⚹	10 Nim — ⚹	10 Nim — ⚹	10 Str — —	10 Str — —
10	1 Str — —	1 Str — —	2 Str — ⌊	3 Str — —	Cir, Cir-s NNW 4 Str — —	Cir-s NNW 3 Str — —
11	0 — — — —	0 — — — —	2 Str — —	1 Str — —	2 Str — —	2 Str — —
12	2 Str — —	2 Str — —	4 Str — ⌊	10 Str — —	7 Str — —	Cum 9 Cum-s — —
13	10 Str — —	10 Str — —	10 Cum-s — —	9 Cum-s — —	Cum-s 9 Str — —	9 Cum-s — —
14	4 Str — Ψ	4 Str — —	3 Str — —	5 Str — —	5 Str — —	6 Str — ○
15	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Nim — ⚹
16	0 — — — —	1 Str — —	2 Str — ⌊ —	3 Str — —	3 Str — —	3 Str — —
17	2 Str — —	3 Str — Ψ —	3 Str — —	3 Str — —	10 Str — —	7 Str — —
18	0 — — — —	0 — — — —	0 — — — ⌊	0 — — — —	0 — — — —	0 — — — —
19	1 Str — —	2 Str — —	1 Str — —	1 Cir — —	3 Cir — —	2 Cir — —
20	2 Str — —	1 Str — —	1 Str — —	1 Str — —	1 Str — —	1 Str — —
21	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — ∞	10 Str — ∞
22	10 Nim — ● ⚹	10 Nim — ● ⚹	10 Nim — ● ⚹	10 Nim — ● ⚹	10 Nim — ⚹	10 Cum-s — —
23	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Nim — ⚹
24	9 Cum-s — —	9 Cum-s — —	9 Cum-s — —	4 Cum-s — ⌊	1 Cum-s — —	1 Cum-s — —
25	3 Str — —	1 Str — —	1 Str — —	2 Str — —	1 Str — —	2 Str — —
26	1 Str — —	1 Str — —	1 Str — —	1 Str — ⌊	1 Str — —	1 Str — —
27	Cum-s 8 Str — —	8 Cum-s — —	10 Cum-s — ⌊	9 Cum-s — —	8 Cum-s — —	4 Cum-s — —
28	7 Str — —	10 Str — —	10 Cum-s — —	10 Cum-s — —	10 Cum-s — —	9 Cum-s — —
29	8 Cum-s — —	7 Cum-s — —	8 Str — —	7 Str — —	7 Cum-s — —	6 Cum-s — —
30	Cum-s 8 Str — —	10 Str — —	10 Str — —	Cum-s 8 Str — —	7 Cum-s — —	7 Cum-s — —
Mean	4·7	5·1	5·8	5·9	6·0	5·8

7			8			9			10			11			Noon.			Daily Amount of Downfall.
																		m.m.
Cir-c 7 Cum-s	ESE	— —	Cir-s 8 Cum-s	ESE	— —	Cir 5 Cum-s	ESE	— —	8 Cum-s		— —	8 Cum-s		— —	10 Cum-s		— —	—
10 Str		— —	10 Cum-s		— —	9 Cum-s		— —	9 Cum-s		— —	8 Cum-s		— —	4 Cum-s		— —	—
10 Nim		— ⚹	Cir, cir-c 9 Cum-s	NW	— —	Cir, Cir-c 9 Str	NW	— —	Cir-s 6 Str	NNW	— —	Cir-s 5 Cum-s	NNW	— —	Cir-s 6 Cum-s	NNW	— —	—
0 —		— ⌊	1 Cir-s	N	—	1 Cir-s		— —	2 Cir-s		— —	6 Cum-s		— —	Cum 3 Cum-s		— —	—
3 Str		— —	10 Str		— ○	4 Str		— ○	Cir-s 4 Str		— ○	Cir-s 6 Str		— ○	Cir-s 9 Str		— ○	—
9 Cum-s		— —	9 Cum-s		— —	7 Cum-s		— —	6 Cum-s		— —	6 Cum-s		— —	6 Cum-s		— —	—
7 Cum-s		— —	8 Cum-s		— —	8 Cum-s		— —	8 Cum-s		— —	Cum-s 5 Str		— —	Cum-s 3 Str		— —	—
10 Nim		— ⚹	6 Cum-s		— —	10 Cum-s		— —	10 Cum-s		— —	10 Cum-s		— —	10 Cum-s		— —	—
10 Str		— —	9 Str		— —	9 Cum-s		— —	9 Cum-s		— —	9 Cum-s		— —	Cir-c 8 Cum-s	NW	— —	—
4 Cir-s		— —	4 Cir-s	SE	—	1 Cir-s		— —	1 Cir-s		— —	1 Cir-s		— —	1 Cir-s		— —	—
1 Str		— —	Cir-s 2 Cum-s		— —	Cir 2 Cir-s	SE	— —	2 Cir-s		— —	1 Cir-s		— —	1 Cir-s		— —	
Cum 8 Cum-s		— —	Cum 6 Cum-s		— —	Cir-s, Cir-c 5 Cum-s		— —	Cir, Cir-c 5 Cum-s		— —	Cir-c 7 Cum-s	NNW	— —	Cir 8 Cum-s	NNW	— —	
9 Str		— —	10 Str		— —	10 Str		— —	10 Str		— —	10 Str		— —	9 Str		— —	...
9 Cum-s		— —	10 Cum-s		— —	10 Cum-s		— —	10 Cum-s		— —	10 Cum-s		— —	9 Cum-s		— —	—
10 Cum-s		— —	10 Cum-s		— —	10 Cum-s		— —	9 Cum-s		— —	10 Cum-s		— —	9 Cum-s		— —	—
4 Str		— —	Cir-s 3 Str		— —	3 Cir-s		— —	2 Cir-s		— —	1 Cir-s		— —	1 Cir-s		— —	—
10 Str		— -	9 Str		— ○	Cir-s 8 Str		— —	9 Str		— ○	8 Str		— ○	8 Str		— ○	—
0 —		— —	0 —		— —	0 —		— —	0 —		— —	0 —		— —	0 —		— —	—
Cir-s 2 Str		— —	1 Cir-s		— —	2 Cir-s		— —	1 Cir-s		— —	2 Cir-s		— —	Cir 3 Cir-s	NNW	— —	—
1 Str		— —	1 Str		— —	2 Cir-s		— —	7 Cum-s		— —	9 Cum-s		— —	10 Cum-s		— —	—
10 Str		— —	10 Str		— ∞	10 Str		— ∞	10 Nim		—∞ ○	10 Str		— ∞	10 Str		— ∞	2·8
10 Nim		— ⚹	10 Str		— —	8 Cum-s		— —	9 Cum-s		— —	8 Cum-s		— —	8 Cum-s		— —	1·1
10 Str		— —	10 Str		— —	10 Str		— —	10 Str		— —	10 Str		— —	Cir-c 7 Cum-s	W	— —	—
2 Cum-s		— —	4 Cum-s		— —	Cir-s 4 Cum-s		— —	Cir-s 4 Str		— —	6 Str		— —	9 Str		— ○	—
6 Str		— —	5 Cir-s		— —	4 Cir-s		— —	1 Cir-s		— —	1 Cir-s		— —	1 Cir-s		— —	—
1 Str		— —	1 Str		— —	1 Cir-s		— —	Cir-s 1 Str		— —	1 Cir-s	W	—	Cir 4 Cir-s	W	—	—
6 Cum-s		— —	6 Cum-s		— —	6 Cum-s		— —	6 Cum-s		— —	7 Cum-s		— —	9 Cum-s		— —	—
9 Cum-s		— —	9 Cum-s		— —	9 Cum-s		— —	9 Cum-s		— —	9 Str		— —	9 Cum-s		— —	—
6 Cum-s		— —	Cum-s 6 Str		— —	Cum-s 7 Str		— —	Cir-c 4 Cum-s, Str	ESE	— —	Cir-c 4 Cum-s, Str	ESE	— —	Cir-s, Cir-c 5 Cum-s	E	— —	—
9 Cum-s		— —	9 Cum-s		— —	7 Cum-s		— —	Cir-s 3 Str		— —	Cir-s 2 Str		— —	Cir-s 2 Str		— —	—
6·4			6·5			6·0			5·9			6·0			6·0			3·9

April 1883—*continued.*

Day.	1		2		3		4		5		6	
1	9 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —	7 Cum-s	— —	7 Cum-s	— —	8 Cum-s	— —
2	Cir-s 3 Str	— —	4 Cum-s	— —	8 Cum-s	— —	8 Cum-s	— —	10 Cum-s	— —	10 Cum-s	— —
3	Cir 6 Cum-s	NNW — —	Cir 7 Cum-s	NNW — —	8 Cum-s	— —	8 Cum-s	— —	9 Cum-s	— —	Cir, Cir-s 5 Cum-s	— —
4	Cum 1 Cum-s	— —	1 Cum	— —	1 Cum	— —	0 —	— —	0 —	— —	0 —	— —
5	10 Str	— ○	8 Str	— ○	9 Str	— ○	Cir-s, Cir 9 Str	NW — —	Cir 9 Str	NW — —	7 Str	— ○
6	Cir-s 7 Cum-s	— —	8 Cum-s	— —	8 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —
7	Cir-s 4 Str	— —	Cir-s 5 Str	— —	Cir-s 5 Str	— —	Cir-s 5 Str	— ○	Cir-s 8 Str	— ○	9 Str	— —
8	10 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —	Cum-s 9 Str	— —	Cir-c 6 Str	— ○
9	5 Cum-s	— —	Cir-s 4 Cum-s	NW — —	6 Cum-s	— —	6 Cum-s	— —	7 Cum-s	— —	9 Cum-s	— —
10	Cir-s 2 Cum	— —	Cir-c 3 Cir-s	— —	Cir-s 3 Cum	— —	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —
11	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —	2 Cir-s	— —
12	8 Cum-s	— —	Cir-c 9 Cum-s	NNW — —	Cum 8 Cum-s	— —	Cum 7 Cum-s	— —	5 Cum-s	— —	Cir-s 5 Cum-s	— —
13	9 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —	8 Cum-s	— —	8 Cum-s	— —
14	8 Cum-s	— —	7 Cum-s	— —	Cum-s 4 Str	— ○	Cir-s 4 Cum-s	— ○	3 Cum-s	— ○	Cir-s, Cir-c 4 Str	— —
15	9 Cum-s	— —	8 Cum-s	— —	8 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —
16	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —
17	8 Str	— ○	Cir-s 7 Str	— ○	Cir 5 Cir-s	NW — —	2 Cir-s	— —	Cir-s 2 Str	— —	Cir-s 2 Str	— —
18	0 —	— —	0 —	— —	0 —	— —	0 —	— —	1 Str	— —	1 Str	— —
19	Cir 2 Cir-s	— —	Cir 2 Cir-s	— —	Cir 2 Cir-s	— —	Cir 1 Cir-s	— —	Cir 1 Cir-s	— —	1 Cir-s	— —
20	10 Cum-s	— —	10 Str	— —	10 Str	— —	10 Str	— —	10 Nim	— ⁂	10 Nim	— ⁂
21	10 Str	— ∞	10 Str	— ∞	10 Str	— ∞	10 Cum-s	— —	10 Cum-s	— —	10 Nim	— ●
22	6 Cum-s	— —	10 Str	— —	6 Cum-s	— —	6 Cum-s	— —	7 Cum-s	— —	8 Cum-s	— —
23	1 Cir-s	— —	1 Cir-s	— —	Cir 2 Cir-s	S —	Cir c 2 Cir-s	SE — —	1 Cir-s	— —	1 Cir-s	— —
24	Cir-c 9 Str	— ○	10 Cum-s	— —	10 Cum-s	— —	Cir-c 10 Cum-s	— —	9 Cum-s	— —	Cir 9 Cum-s	SW — — ○
25	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —	1 Cir-s	— —
26	Cir-s 4 Cum	W — —	6 Cir-s	— ○	Cir s 3 Str	W — —	Cir-s 4 Str	W — —	Cir-c, Cir-s 7 Cum-s	— —	Cir 6 Cum-s	W — —
27	9 Cum-s	— —	9 Cum-s	— —	9 Cum-s	— —	8 Cum-s	— —	7 Cum-s	— —	9 Cum-s	— —
28	9 Cum-s	— —	8 Cum-s	— —	9 Cum-s	— —	9 Str	— —	9 Cum-s	— —	9 Cum-s	— —
29	Cir-c 6 Cir-s	SE — —	Cir-c, Cir-s 6 Cum-s	SE — —	Cir-c, Str 5 Cum-s	NW — —	Cir-c 6 Cir-s	NW — —	Cir-c 5 Cir-s	NW — —	Cir-c 4 Str, Cum-s	NW — —
30	Cir-s 2 Str	— —	Cir-s 2 Str	— —	2 Str	— —	3 Str	— —	Cir-s 3 Str	— —	Cir-s 3 Cum-s	— —
Mean	5·7		5·8		5·7		5·5		5·6		5·6	

Sums of Hydrometeors: 24 ⁂, 8 ●, 10 ⌴, 10 ∞.

7	8	9	10	11	Midnight.	Mean Daily Amount of Cloud.
8 Cum-s	7 Cum-s	6 Cum-s	5 Cum-s	4 Str	5 Str	7·7
10 Cum-s	10 Cum-s	10 Cum-s	10 Cum-s	10 Cum-s	10 Cum-s	8·1
Cir-s 6 Cum-s	4 Cum-s	3 Cum-s	0 —	1 Str	1 Str	6·7
0 —	1 Str	0 —	0 —	0 —	0 —	0·7
10 Str	10 Str	9 Str	8 Str	5 Str	3 Str	5·7
9 Str	10 Str	9 Str	1 Str	0 —	0 —	7·1
10 Str	10 Str	5 Str	4 Str	4 Str	4 Str	5·5
Cir 9 Cum-s	9 Cum-s	9 Str	8 Str	3 Str	4 Str	7·8
9 Str	7 Str	9 Str	8 Str	5 Str	4 Str	7·7
1 Str	0 —	1 Str	0 —	0 —	0 —	1·6
Cir-s 6 Str	5 Str	5 Str	4 Str	2 Str	2 Str	2·0
7 Cum-s	4 Str	3 Str	5 Str	9 Cum-s	10 Str	6·4
8 Cum-s	4 Cum-s	4 Str	Cum-s 2 Str	5 Str	4 Str	8·1
Cir-c 4 Str	3 Str	2 Str	6 Cum-s	10 Str	10 Str	6·2
9 Cum-s	2 Str	1 Str	1 Str	1 Str	1 Str	7·7
1 Cir-s	1 Str	1 Str	1 Str	1 Str	1 Str	1·6
2 Str	1 Str	1 Str	1 Str	0 —	0 —	4·6
1 Str	1 Str	1 Str	1 Str	1 Str	1 Str	0·3
1 Cir-s	1 Str	1 Str	1 Str	0 —	0 —	1·4
10 Nim	10 Nim	10 Nim	10 Str	10 Str	10 Str	6·5
10 Nim	10 Str	10 Nim	10 Nim	10 Nim	10 Nim	10·0
9 Cum-s	10 Str	10 Str	10 Str	10 Str	10 Str	9·0
Cir 4 Str	5 Str	6 Str	5 Str	5 Str	5 Str	9·5
Cir-s 7 Str	10 Str	10 Str	9 Str	4 Str	4 Str	6·8
1 Cir-s	1 Str	1 Str	1 Str	0 —	0 —	1·6
Cir 5 Cum-s	4 Str	3 Str	3 Str	1 Str	Cum-s 4 Str	2·7
8 Cum-s	10 Str	10 Str	10 Str	10 Str	10 Str	8·2
9 Cum-s	Cum-s 9 Str	7 Cum-s	Cum-s 7 Str	9 Cum-s	9 Cum-s	8·9
5 Cum-s	Cir-c 6 Str	7 Cum-s	6 Str	6 Str	Cum-s 7 Str	6·0
4 Cum-s	Cum-s 4 Str	Cum-s 4 Str	2 Str	Cum-s 3 Str	3 Str	4·9
6·1	5·6	5·3	4·6	4·3	4·4	5·7

May 1883.

Day.	1	2	3	4	5	6
1	3 Str — —	3 Str — —	5 Str — —	6 Str — —	8 Str — —	7 Cum-s — —
2	9 Cum-s — —	9 Cum-s — —	9 Str — —	9 Cum-s — —	10 Str — —	10 Nim — ⚹
3	9 Str — —	Cir-c 7 Str —	9 Str — —	5 Cum-s — —	10 Str — —	10 Str — —
4	1 Str — —	1 Str —	2 Str — —	2 Str — —	1 Str — —	1 Str — —
5	6 Str — —	7 Cum-s — —	9 Cum-s —	9 Cum-s — —	9 Cum-s — —	9 Cum-s — —
6	10 Str — —	9 Cum-s — —	7 Cum-s — —	Cir-s WNW 5 Cum-s — —	Cir-s WNW 7 Cum-s, Str — —	Cir-s 5 Str — —
7	1 Str — —	1 Str — —	2 Str — —	2 Str — —	4 Str — —	5 Str — —
8	7 Str — —	7 Str — —	8 Str — —	8 Cum-s — —	Cum 7 Cum-s — —	7 Cum-s — —
9	2 Cum-s — —	2 Cum-s — —	Cum-s 2 Str — —	Cir-s 1 Str — —	1 Str — —	1 Str — —
10	9 Str — —	9 Str — —	7 Str — —	7 Cum-s — —	7 Cum-s — —	7 Cum-s — —
11	1 Str — —	1 Str — —	1 Str —	1 Str — ∞	1 Str — ∞	2 Str — ∞
12	0 — — — —	0 — —	0 — — —	0 — — —	0 — — —	1 Str — —
13	8 Cum-s — —	5 Cum-s — —	3 Cum-s — —	2 Cum-s — —	Cir-c 1 Cum-s — —	0 — — —
14	0 — — —	0 — — —	0 — — —	0 — — ∞	0 — — ∞	0 — — ∞
15	2 Str — —	2 Str — —	2 Str — —	1 Str —	1 Str — —	0 — — —
16	1 Str — ⚹	0 — — —	1 Str — —	2 Str — —	2 Str — —	3 Str — —
17	2 Str — —	4 Cum-s — —	8 Cum-s — —	3 Cum-s — —	3 Cum-s — —	Cum 8 Cum-s — —
18	1 Str — ☽	8 Str — —	Cum-s 5 Str — —	6 Cum-s — —	10 Str — —	10 Str — —
19	10 Cum-s — —	10 Nim — ●	10 Nim — ●	10 Cum-s — —	10 Cum-s — —	10 Str — —
20	5 Cum-s — —	5 Cum-s — —	Cum-s 8 Str — —	Cum-s 8 Str — —	Cir-s 6 Cum-s — —	Cir-c NW 6 Cum-s — —
21	Cum s 2 Str — —	2 Cum-s — —	1 Str — —	Cir-c NE 3 Str — —	Cum-s 4 Str — —	Cir-s 2 Cum-s — —
22	Cum-s 9 Nim — —	9 Cum-s — —	9 Cum-s SW —	Cum-s 9 Str — —	Cum-s 9 Nim — —	Cum-s 9 Nim — —
23	4 Cum-s — —	4 Str — —	Cir-s 6 Str —	Cir-s N 5 Str — —	4 Cir-s — —	2 Cir-s — —
24	Cum-s 5 Str — —	Cir-s 4 Cum-s — —	Cir-s 2 Cum-s —	Cir-s 2 Str — —	Cir-s 1 Str — —	Cir-s 3 Str — —
25	9 Cum-s WNW —	10 Str WNW —	9 Cum-s WNW —	Cum-s 9 Str WNW —	Cum-s 9 Nim WNW ◠ ● △	Cum-s 9 Nim — —
26	Cum-s 7 Str — —	Cum-s 7 Str — —	Cum-s 8 Str — —	Cir-s 6 Cum-s — —	Cir-s 3 Cum-s — —	Cir-s 3 Cum-s — —
27	Cum-s 3 Str — —	Cum-s 6 Str — —	Cum-s 4 Str — —	Cum-s 8 Str — —	7 Cum-s — —	9 Cum-s — —
28	4 Str — —	3 Str — —	6 Str — —	Cum-s 8 Str — —	8 Cum-s — —	Cum-s 7 Str — —
29	Cir-s 4 Str — —	Cir-s 5 Str — —	Cir-s 5 Str —	2 Cir-s — ∞	1 Cir-s — ∞	1 Cir-s — ∞
30	8 Nim — ◡ ●	Nim 7 Str — ●	Cir, Cir-s NW 6 Cum-s, Str — —	Cir, Cir-c NW 6 Cum-s — —	8 Cum-s — —	Cir-c NW 8 Cum-s, Str — —
31	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —
Mean	4·9	5·1	5·3	5·0	5·2	5·3

7			8			9			10			11			Noon.			Daily Amount of Downfall.
																		m.m.
Cum			Cir-s			Cir-s, Cir-c	NW		Cir-c	NW		Cir-c	NW		Cir-c			
5 Cum-s	—	—	6 Str	—	—	7 Cum	—	—	5 Cir-s	—	—	4 Cir-s	—	—	4 Cir-s	—	—	—
Cum-s																		
7 Str	—	⊣⊢	10 Str	—	⊣⊢	10 Str	—	⊣⊢	9 Str	—	—	10 Str	—	—	10 Str	—	—	2·3
5 Cum-s	—	—	Cum			5 Rolled Cum	—	—	Cum			7 Cum-s	—	—	9 Cum-s	—	—	—
			5 Cum-s	—	—				6 Cum-s	—	—							
1 Cir-s	—	—	1 Cir-s	—	—	2 Cir-s	—	—	Cir	NW		Cir	NW		Cir	NW		—
									6 Cir-s	—	—	5 Cir-s	—	—	5 Cir-s	—	—	
9 Cum-s	—	—	7 Cum-s	—	—	8 Cum-s	—	—	9 Cum-s	—	—	9 Cum-s	—	—	7 Cum-s	—	—	—
Cir-s			Cir-s			Cir-s			Cir-s									
5 Str	—	—	4 Str	—	○	3 Str	—	○	1 Str	—	—	1 Cir-s	—	—	1 Cir-s	—	—	—
									Cir-c	W		Cir-c	NW		Cir-c	NW		
7 Cir-s	NW	—	8 Cir-s	NW	—	8 Cir-s	NW	—	8 Cir-s	N	—	9 Cir-s	—	—	8 Cir-s	—	—	—
									Cir-c	NW		Cir-c, Cir-s	NW		Cir-s, Cir-c	NW		
8 Cum-s	—	—	9 Cum-s	—	—	8 Cum-s	—	—	7 Cum-s	—	—	7 Str	—	—	5 Cum-s	—	—	—
															Cum-s			
2 Str	—	—	2 Str	—	—	2 Str	—	—	3 Str	—	—	4 Str	—	—	4 Str	WSW	—	—
												Cir-s						
5 Cum-s	—	—	4 Cum-s	—	—	3 Cum	—	—	6 Cum	—	—	3 Cum-s	—	—	1 Cir-s	—	—	—
0 —	—	—	0 —	—	—	0 —	—	∞	0 —	—	∞	0 —	—	∞	0 —	—	∞	—
0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	1 Cir	—	—	—
0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	∞	0 —	—	∞	0 —	—	∞	—
0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	—	1 Cum	—	—	—
0 —	—	—	1 Str	—	—	1 Str	—	—	1 Cum	—	—	1 Cum	—	—	1 Str	—	—	—
1 Cir-s	—	—	0 —	—	∞	0 —	—	∞	0 —	—	∞	0 —	—	∞	1 Str	—	∞	—
Cum																		
6 Cum-s	—	—	10 Cum-s	—	—	10 Str	—	∞	10 Str	—	∞	10 Str	—	∞	10 Str	—	∞	—
10 Str	—	—	10 Str	—	—	10 Cum-s	—	—	10 Cum-s	—	—	10 Cum-s	—	—	9 Cum-s	—	—	—
			Cir-c			Cir-c, Cir-s	SSW								Cum			
10 Str	—	—	8 Cum-s	—	—	6 Cum-s	—	—	4 Cir-s	SW	—	3 Cir-s	SW	—	3 Cum-s	—	—	0·2
Cir-c	SE								Cum			Cum			Cum			
4 Cum-s	—	—	1 Cum-s	—	—	1 Cum-s	—	—	1 Cum-s	—	—	2 Cum-s	—	—	4 Cum-s	—	<	—
									Cir-s, Cum						Cum, Nim			
2 Cum-s	—	—	1 Cum-s	—	—	2 Cum-s	—	—	3 Cum-s	—	—	4 Cum	—	—	5 Cum-s	—	—	—
Cum-s									Cum			Cum			Nim			
9 Str	—	—	10 Nim	—	●	9 Nim	—	●	9 Cum-s	—	—	9 Cum-s	—	—	9 Cum-s	SW	—	0·1
						Cir, Cir-s	NNW		Cir-s, Cum			Cum			Cum			
1 Cir-s	—	—	5 Cir-s	NNW	—	3 Cum-s	—	—	2 Cum-s	—	—	2 Cum-s	—	—	3 Cum-s	—	—	0·8
Cir-s			Cum			Cum			Cum			3 Cum	—	—	4 Cum	—	—	—
3 Str	—	—	2 Str	—	—	2 Str	—	—	2 Str	—	—							
			Cum-s			Cum-s			Cum-s			Cum-s			Cir-c	SW		
9 Cum-s	—	—	10 Str	—	●	9 Nim	—	●	9 Nim	NW	●	8 Nim	NW	●	6 Cum-s	—	—	0·8
Cir-s			Cir-s	ESE		Cir-s	ESE		Cir-s	NW		Cir-s	NW		Cir-s	NW		
2 Str	—	—	3 Str	—	—	3 Cum-s	—	—	4 Cum-s	—	—	5 Cum, Cum-s	—	—	2 Cum, Cum-s	—	—	0·2
						Cum									Cir-c, Nim			
8 Cum-s	—	—	7 Cum-s	—	—	7 Cum-s	—	—	6 Cum-s	—	—	6 Cum-s	—	—	7 Cum-s	WNW	Mirage	—
						Cum									Cir-s			
9 Cum-s	—	—	9 Cum-s	—	—	4 Cum-s	—	—	6 Cum-s	—	—	5 Cum-s	NW	∞	6 Cum-s	NW	∞	—
						Cir-s			Cir-s			Cir-s			Cir-s			
1 Cir-s	—	—	1 Cir-s	—	—	1 Cum	—	—	1 Cum	—	—	1 Cum	—	—	1 Cum	—	—	—
Cum-s			Cum-s			Cum-s												
9 Nim	—	●	9 Nim	—	●	10 Str	—	—	10 Nim	—	⊼ ●	10 Cum-s	—	—	10 Nim	—	⊼ ●	0·8
															Cir-s, Cir-c	NW		
10 Str	—	—	Cum-s			Cum			Cum			Cir-c, Cir-s	NW		8 Cum	—	—	0·8
			10 Str	—	—	9 Cum-s	—	—	7 Cum-s	—	○	7 Cum	—	○				
4·8			4·9			4·6			4·7			4·8			4·7			6·0

May 1883—*continued.*

Day.	1	2	3	4	5	6
1	Cir-s 5 Str — —	Cir-s 6 Str — ○	9 Cum-s — —	9 Str — —	Cir-s 9 Str — —	Cir-s 9 Str — —
2	10 Str — —	10 Str — —	10 Str — —	Cum-s 9 Str — —	6 Cum-s — —	10 Nim — ⚹ ⸸
3	7 Cum-s — —	9 Cum-s — —	9 Cum-s — —	9 Cum-s — —	8 Cum-s — —	9 Cum-s — —
4	Cir NW 5 Cir-s — —	Cir 7 Cir-s — —	Cir NW 7 Cir-s — —	Cir NW 6 Cir-s — —	Cir NW 7 Cir-c — —	Cir, Cir-c NW 7 Cir-s — —
5	Cum, Cir-c NW 6 Cum-s — —	Cir-s 3 Cum-s — —	Cir-c NW 3 Cum-s — —	Cum 7 Cum-s NW —	Cir-c NW 4 Cum-s, Str — —	Cir-c NW 5 Cum-s, Str — —
6	1 Cir-s — —	1 Cir-s — —	1 Cir-s — —	1 Cir-s — —	Cir-s 1 Str — ○	1 Str — —
7	Cum 8 Cum-s NW —	9 Cum-s NW —	9 Cum-s — —	9 Cum-s — —	9 Str — ○	9 Cum-s — ○
8	Cir-c NW 8 Cum-s, Str — —	Cir-c NW 6 Cum-s, Str — —	9 Cum-s NW —	Cir-c NNW 7 Cum-s — —	Cir-c NNW 9 Cum-s — —	9 Cum-s — —
9	6 Cum-s — —	7 Cum-s — —	8 Cum-s — —	9 Cum-s — —	8 Cum-s — —	9 Cum-s — —
10	1 Cir-s — —	1 Cir-s — —	1 Cir-s — —	0 — — —	0 — — —	0 — — —
11	0 — — ∞	0 — — ∞	0 — — ∞	0 — — —	0 — — —	0 — — —
12	Cir 3 Cir-s NE —	4 Cir-s NE —	4 Cir-s NE —	Cir 4 Cir-s ESE —	2 Cir-s ESE —	1 Cir — —
13	0 — — ∞	0 — — ∞	0 — — ∞	0 — — ∞	0 — — ∞	1 Cir-s — ∞
14	1 Cum — —	1 Cum — —	1 Cum — —	1 Cum — —	1 Cum — —	1 Cir-s — —
15	Cum 1 Str — —	Cum 1 Str — —	Cum 1 Str — —	1 Cir-s — —	1 Cir-s — —	1 Cir-s — —
16	1 Cum — ∞	1 Cum — ∞	1 Cum — ∞	1 Cum — ∞	1 Cum — ∞	1 Cum-s — ∞
17	Cum 5 Cum-s — ∞	Cum 4 Cum-s — ∞	10 Str — ∞	10 Str — ∞	10 Str — —	Cum 8 Cum-s — —
18	10 Cum-s — —	10 Cum-s — —	10 Cum-s — —	10 Cum-s — —	8 Cum-s — —	9 Cum-s — —
19	3 Cum — —	7 Cum-s — —	5 Cum-s — —	3 Cum-s — —	4 Cum-s — —	4 Cum-s — —
20	Cum 6 Cum-s — —	Cum 8 Nim ESE ●	9 Cum-s — —	Cum-s 6 Nim ESE ⊤	6 Cum-s — —	Cir-s NW 4 Cum-s — —
21	Cum, Cum-s 6 Nim — ⊤	Cum-s 7 Nim — —	Cum-s 8 Nim — —	Cum-s 9 Nim — —	9 Cum-s — —	Cir-s 9 Cum-s, Str — ○
22	Cum 8 Cum-s — —	9 Nim — ●	9 Cum-s — —	9 Cum-s — —	10 Nim — ●	9 Nim — ●
23	Cum 2 Cum-s — —	Cum 2 Cum-s — —	1 Cum-s — —	Cum 1 Cum-s — —	Cum 1 Cum-s — —	Cir-s 1 Cum-s — —
24	3 Cum — —	3 Cum — —	4 Cum — —	4 Cum — —	Cum 3 Cum-s — —	Cir-s, Cum 4 Cum-s — —
25	Cir-s 4 Cum-s — —	Cir-s 8 Cum-s — —	Cir-s 7 Cum-s — —	Cir-s NW 9 Cum-s — —	9 Cum-s — —	9 Cum-s — —
26	Cir-s NW 2 Cum, Cum-s — —	Cir-s NW 2 Cum, Cum-s — —	Cum 3 Cum-s — —	Cum 2 Cum-s — —	Cum 2 Cum-s — —	Cum 2 Cum-s — —
27	Cum-s 8 Nim — ●	9 Cum-s — —	9 Cum-s — —	9 Cum-s — —	9 Cum-s — —	9 Cum-s — —
28	Cir-s WSW 5 Cum-s NW ∞	Cir-s 5 Cum-s — ∞	Cir-s 3 Cum-s — ∞	Cir W 3 Cum-s — ∞	Cir WNW 3 Cum-s — ∞	Cir-s 5 Cum-s — ∞
29	Cir-s 2 Cum — —	Cir-s NW 5 Cum — —	Cir, Cir-s NW 7 Cum, Cum-s — ○	Cum, Cir-s NW 8 Cum-s — ∞	Cum, Cir-s NW 9 Cum-s — ○	Cum, Cir-s NW 9 Cum-s — —
30	10 Cum-s — —	10 Cum-s — —	Cum-s 10 Str — —	Cum-s 10 Str — —	Cum-s 10 Str — —	Cum-s 10 Str — —
31	Cir NW 6 Cir-s — —	Cir NW 7 Cir-s — —	Cir NW 5 Cir-s — —	Cir NW 5 Cir-s — —	Cir NW 3 Cir-s — —	Cir NW 2 Cir-s — ∞
Mean	4·6	5·2	5·6	5·5	5·2	5·3

Sums of Hydrometeors: 25 ●, 2 △, 4 ⚹, 4 ⸸, 8 ⌴, 2 ⌓, 58 ∞.

7	8	9	10	11	Midnight.	Mean Daily Amount of Cloud.
10 Str — —	9 Str — —	8 Str — —	Cum-s 4 Str — —	Cum-s 5 Str — ⅄	Cum-s 6 Str — —	6·3
9 Cum-s — —	9 Cum-s — —	10 Cum-s — —	10 Cum-s — —	10 Str — —	10 Str — —	9·4
6 Str — —	2 Str — —	1 Str — —	1 Str — —	1 Str — —	1 Str — —	6·2
Cir, Cir-c NW 7 Cir-s, Str — —	Cir, Cir-c NW 7 Cir-s, Str — —	2 Str — —	2 Str — —	3 Str — ⅄	3 Str — ⅄	3·8
5 Cum-s — —	3 Cum-s NW —	4 Cum-s — —	4 Cum-s — —	8 Cum-s — —	9 Cum-s — —	6·6
1 Cir-s — —	Cir, Cir-s NW 4 Str — —	2 Str — —	1 Str — —	1 Str — ⅄	1 Str — —	3·1
Cir, Cir-s NW 6 Str — —	Cir-s NW 7 Cum-s, Str — —	8 Cum-s NNW —	Cum-s 8 Str NNW —	9 Cum-s — —	8 Str — —	6·7
Cir-c NW 4 Cum-s — —	Cir, Cir-c NW 3 Str — —	Cir-c NW 3 Str — —	3 Cum-s — —	1 Str — —	Cum-s 5 Str — ⅄	6·5
10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	9 Str — ⅄	5·5
0 — — —	1 Str — —	1 Str — —	1 Str — —	1 Str — —	1 Str — ⅄	3·2
0 — — —	0 — — —	0 — — —	0 — — —	0 — — ⅄	0 — — ⅄	0·3
1 Cir-s — —	1 Cir-s — —	1 Cir-s — —	Cir-s 3 Str — —	2 Str — ⅄	5 Cum-s — ⅄	1·3
0 — — —	1 Cum-s — —	1 Str — —	1 Str — —	0 — — —	0 — — —	1·0
2 Cum-s — —	2 Cum-s — —	Cir-c 1 Str — —	1 Str — —	2 Str — —	2 Str — ⅄	0·7
Cir NW 1 Cir-s — 8	1 Cir-s — —	1 Str — —	1 Str — —	1 Str — —	1 Str — —	1·0
Cum 1 Cum-s — —	1 Cum-s — 8	1 Str — 8	1 Cum-s — 8	2 Str — —	1 Str — —	1·0
Cir-c 8 Cum-s — —	Cir-c 7 Cum-s — —	7 Cum-s — —	4 Cum-s — —	1 Cum-s — —	2 Str — ↻	6·7
9 Cum-s — —	Cir-c NW 7 Cum-s SE —	8 Cum-s — —	3 Cum-s — —	Cum-s 3 Str — —	Cum-s 6 Str — —	8·0
4 Cum — —	Cum-s 2 Str — —	2 Str — —	2 Str — —	Cir-c 3 Cum-s — —	4 Cum-s — —	5·7
5 Cum-s — —	5 Cum-s — —	5 Cum-s — —	5 Cum-s — —	Cum 3 Cum-s — —	Cum 6 Cum-s — ⅄	5·0
Cum-s 9 Str — —	Cum-s 8 Str — —	Cir-s 9 Cum-s, Str — ○	9 Str — —	Cum-s 8 Str — —	9 Cum-s —○●	5·5
10 Nim — ●	Cum-s 9 Nim — ●	9 Str — —	9 Nim — ●	Cum-s 7 Str — —	Cum-s 6 Str — —	8·9
Cir-s 1 Cum-s — —	Cir-s 1 Cum-s — —	Cir-s 1 Str — —	Cir-s 1 Str — —	Cir-s 6 Cum-s — —	Cir-s 6 Str — —	2·7
Cir, Cir-s 4 Cum-s — —	Cir-s 4 Cum-s — —	Cir-s, Cir NW 6 Cum-s — —	9 Cum-s — —	9 Str WNW —	8 Cum-s WNW —	3·9
Cum-s 9 Str — —	Cir-s NW 7 Cum-s — —	Cir-c NW 6 Cum-s, Str — —	Cum-s 8 Str — —	Cum-s 7 Str — —	Cum-s 7 Str — —	8·2
Cum 3 Cum-s — —	4 Cum-s — —	Cum-s 4 Str — —	Cum-s 7 Str — Mirage	4 Cum-s — —	3 Cum-s — —	3·8
9 Cum-s — —	10 Cum-s — —	9 Cum-s — —	Cum-s 6 Str — —	Cum-s 5 Str — —	9 Cum-s — —	7·5
Cir-s NW 3 Str — —	Cir-s, Cir NW 4 Str — —	Cir-s 5 Str — —	5 Str — —	Cir-s 5 Str — —	Cir-s 4 Str — —	5·2
Cum 10 Cum-s — —	Cum-s 9 Str — —	Cir-s, Cir-c NW 9 Cum-s, Str — —	9 Cum-s NW —	9 Nim —↾●	Cum-s 8 Nim —↾△	4·9
Cum-s 10 Str — —	Cum-s 10 Str — —	Cum-s 10 Str — —	Cum-s 10 Str — —	Cum-s 10 Str — —	Cum-s 10 Str — —	9·2
Cir 2 Cir-s NW —	1 Cir-s — —	1 Cir-s — —	1 Cir-s — —	1 Cir-s — —	1 Str — —	6·1
5·1	4·8	4·7	4·5	4·4	4·9	5·0

June 1883.

Day.	1			2			3			4			5			6		
1	1 Str	—	—	1 Str	—	—	1 Str	—	—	0 —	—	∞	0 —	—	∞	0 —	—	∞
2	Cum-s 1 Str	—	—	Cum-s 2 Str	—	—	Cum-s 2 Str	—	—	Cir-s 2 Cum-s	—	—	Cir, Cir-s 2 Cum-s, Str	WSW —	—	Cir-s 2 Cum-s	—	—
3	8 Cum-s	—	—	6 Cum-s	—	—	Cir-c 6 Cum-s	—	—	6 Cum-s	—	—	Cir 5 Cum-s	—	—	5 Cum-s	—	—
4	2 Cum-s	—	—	4 Str	—	—	3 Str	—	—	Cum-s 3 Str	—	—	Cir-s 3 Cum-s	SW —	—	Cum 5 Cum-s	—	—
5	Cum-s 4 Str	—	—	Cum-s 4 Str	—	—	Cum-s 2 Str	—	⊃	3 Cum-s	—	—	8 Cum-s	—	—	6 Cum-s	—	—
6	10 Nim	—	●	10 Str	—	—	Cum-s 9 Str	—	—	8 Str	—	—	Cum-s 9 Str	—	—	Cum-s 10 Str	—	—
7	10 Cum-s	—	—	10 Cum-s	—	—	10 Cum-s	—	—	10 Cum-s	—	—	10 Cum-s	—	—	10 Cum-s	—	—
8	10 Nim	—	●	10 Nim	—	●	Cum-s 9 Str	—	—	10 Str	—	—	10 Str	—	—	9 Str	—	—
9	3 Str	—	—	1 Str	—	⌊	1 Str	—	—	2 Str	—	—	1 Str	—	—	1 Str	—	—
10	8 Cum-s	NW	—	7 Cum-s	—	—	Cir-s 6 Cum-s	NW —	—	Cir-s 6 Cum-s	NW —	—	5 Cum-s	—	—	Cir-s, Cum 8 Cum-s	NW	—
11	Cum-s 3 Str	—	—	3 Str	—	—	1 Str	—	—	1 Str	—	—	1 Str	—	—	1 Cir-s	—	—
12	1 Str	—	—	Cir-s 2 Str	—	—	4 Cir-s	—	—	4 Cir-s	—	—	3 Cir-s	—	—	3 Cir-s	—	—
13	Cir-s 6 Str	—	—	Cir-s 6 Str	—	—	Cir-s 8 Cum-s, Str	NW	—	Cir-s 8 Cum-s, Str	NW	—	Cum 8 Cum-s	NW	—	Cum 8 Cum-s	NW	—
14	10 Nim	NW	●	10 Nim	NW	◠ ●	Cum-s 8 Str	NW	—	Cum-s 9 Str	NW	—	Cum s 8 Str	NW	—	10 Str	NW	—
15	9 Cum-s	—	—	10 Cum-s	—	—	Cum-s 9 Str	—	—	9 Cum-s	—	—	8 Cum-s	—	—	8 Cum-s	—	—
16	9 Cum-s	N	—	Cum-s 7 Str	N	—	Cum-s 7 Str	N	—	9 Cum-s	N	—	9 Cum-s	N	—	Cum 9 Cum-s	N	—
17	Cum-s 6 Str	—	—	Cum-s 6 Str	—	—	Cir-s 7 Cum-s, Str	NW	—	Cir c 6 Cum-s	NW	—	9 Cum-s	NW	—	10 Str	NW	—
18	Cum-s 2 Str	—	⊃	Cum-s 3 Str	—	—	7 Cum-s	—	—	8 Cum-s	—	—	9 Cum-s	—	—	9 Nim	—	—
19	Cir-s 9 Str	WNW —	—	Cir-s 9 Str	—	—	Cir-s 9 Str	WNW —	—	7 Cir-s	WNW	—	4 Cir-s	WNW	—	3 Cir-s	WNW	—
20	9 Cum-s	NW	—	9 Cum-s	NW	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—
21	10 Cum-s	NW	—	10 Cum-s	NW	—	10 Cum-s	WNW	—	10 Cum-s	WNW	—	10 Cum-s	—	—	10 Cum-s	—	—
22	8 Str	—	—	Cum-s 8 Str	—	—	9 Str	—	—	9 Str	—	—	8 Str	—	—	9 Str	—	—
23	Cum-s 6 Str	SSW	—	Cir-s 5 Cum-s, Str	NNW —	—	Cir-s 3 Cum-s, Str	NNW —	—	Cir-s 1 Cum-s	NNW —	—	1 Cum s	—	—	1 Cum-s	—	—
24	4 Cum-s	—	—	6 Cum-s	—	—	7 Cum-s	—	—	Cir 9 Cum-s	W —	—	Cir 9 Cum-s	W —	—	Cir 8 Cum-s	SW —	—
25	9 Cum-s	—	—	9 Cum-s	—	—	8 Cum-s	—	—	Cis-c 5 Cum-s	SW —	—	2 Cum-s	—	—	2 Cum-s	—	—
26	Cum-s 9 Str	—	—	Cum-s 7 Str	—	—	Cir-s 7 Cum-s, Str	NNW —	⊃	Cir-s 4 Cum-s, Str	NNW —	—	Cir-s 3 Cum-s	NNW —	—	Cir-s 3 Cum-s	NNW —	—
27	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—
28	0 —	—	—	0 —	—	—	0 —	—	—	0 —	—	∞	0 —	—	∞	1 Cir-s	—	∞
29	Cum 8 Str	—	—	8 Str	—	—	Cum-s 8 Str	—	—	Cum-s 8 Str	—	—	Cum-s 8 Str	—	—	10 Str	—	—
30	1 Str	—	—	1 Str	—	—	3 Cum-s	—	—	3 Cum-s	—	—	3 Cum	—	—	4 Cum	—	—
Mean	6·2			6·1			6·1			6·0			5·8			6·2		

7	8	9	10	11	Noon.	Daily Amount of Downfall.
						m.m.
1 Cir-s — ∞	1 Cir-s — ∞	1 Cir-s — ∞	1 Cir-s — —	1 Cir-s — —	1 Cir-s — —	—
3 Cum-s — —	Cir, Cir-c 3 Cum-s — —	Cir-s 3 Cum-s — —	3 Cum-s — —	Cum 3 Cum-s — Mirage	Cum 4 Cum-s — Mirage	—
Cir-s 5 Cum-s — —	Cir-s, Cum 7 Cum-s NW —	Cum 8 Cum-s — —	Cir-c NW 7 Cum-s — —	Cir-c, Nim NW 8 Cum-s — ●	Cir-c, Cir-s 8 Cum-s — —	—
Cum 3 Cum-s — —	Cir, Cir-s WSW 6 Cum, Cum-s — —	Cir, Cir-s WSW 7 Cum-s — —	Cir, Cir-s WSW 6 Cum, Cum-s — —	Cir, Cir-s SW 5 Cum, Cum-s Mirage	Cir-s 5 Cum, Cum-s, Mirage [WNW —	—
Cum-s 4 Str — —	4 Cum-s — —	4 Cum-s — —	6 Cum-s — —	Cir-c, Cum 5 Cum-s — —	Cir-c, Cum 7 Cum-s — —	—
Cum 7 Cum-s — —	Cum 8 Cum-s — —	Cum 9 Cum-s — —	Cum 9 Cum-s — —	9 Cum-s — —	10 Cum-s — —	—
9 Cum-s — —	9 Cum-s — —	9 Cum-s — —	Cir-s E 4 Cum-s — —	Cir-s SSW 5 Cum-s — —	Cir-s SSW 6 Cum-s — —	—
Cum-s 10 Str — —	Cum-s 9 Str — —	Cum-s 10 Str — —	10 Nim — ●	10 Cum-s — —	10 Cum-s — —	0·2
1 Cum-s — —	2 Cum-s — —	4 Cum-s — —	Cum 6 Cum-s — —	Cum 5 Cum-s — —	Cum 5 Cum-s — —	—
Cum 7 Cum-s — —	10 Nim — ●	7 Cum-s NW —	Cir-s, Cir-c NW 5 Cum-s — —	Cir-s NW 4 Cum-s — —	Cir-s NW 4 Cum-s — —	—
1 Cir-s — —	Cir-s — 1 Cum — —	1 Cum — —	2 Cum — —	2 Cum — —	3 Cum — —	—
2 Cir-s — —	4 Cir-s NW —	2 Cir-s NW —	3 Cir-s NW —	3 Cir-s NW —	2 Cir-s NW —	—
10 Str — —	10 Nim — ●	10 Str — —	Cum-s 9 Str — —	Cum-s 9 Str — —	Cum-s 9 Str — —	—
Cum-s 9 Str — —	Cum-s 9 Str — —	Cum-s 10 Str — —	Cum-s 9 Str — —	Cum-s 9 Str — —	Cum-s 9 Str — —	0·5
Cum 8 Cum-s — —	Cum, Cir-s SW 8 Cum-s — —	Cir-s 8 Cum-s — —	Cir-s WNW 8 Cum-s — —	Cir-s WNW 9 Cum-s — —	Cir-s WNW 9 Cum-s — —	0·1
7 Cum-s NW —	Cir-s NW 3 Cum-s, Str — —	Cir-s NW 2 Cum-s, Str — —	Cir-s NW 3 Cum-s, Str — —	Cum — 6 Cum-s NW —	Cir-c NW 7 Cum, Cum-s — —	—
10 Nim — ●	10 Nim — ●	10 Nim WSW ●	10 Nim WSW ●	Cum-s 9 Nim WNW —	9 Cum-s WNW —	0·8
10 Nim — ●	10 Nim — ●	Cum-s 9 Nim — ●	Cum 9 Cum-s — —	Cir-c NW 8 Cum-s — —	Cir-c WSW 8 Cum-s — —	9·0
2 Cir-s — —	Cir-s W 2 Cum-s — —	Cum, Cir-s W 3 Cum-s — —	Cum, Cir-s W 2 Cum-s — —	Cum, Cir-s W 2 Cum-s — —	Cum, Cir-s W 3 Cum-s — —	0·1
10 Cum-s — —	9 Cum-s — —	Cum-s — 9 Nim — ●	10 Cum-s W —	10 Nim W ●	10 Nim W ●	—
10 Cum-s — —	10 Cum-s — —	9 Cum-s — —	Cum-s 9 Str — —	Cir-s NW 8 Cum-s — —	Cir-s NW 7 Cum-s — —	0·4
9 Cum-s — —	Cum-s — 10 Str — —	Cum-s — 9 Str — —	Cum-s 9 Str — —	Cum-s — 9 Str — —	Cum-s 9 Str — —	0·4
1 Str — —	1 Str — —	1 Cum-s — —	2 Cum-s WSW —	3 Cum WSW —	4 Cum-s WSW —	—
Cir-s SW 6 Cum-s — ∞	Cir-s WSW 7 Cum, Cum-s — ∞	Cir-s WSW 5 Cum-s — ∞	Cir-s WSW 3 Cum-s — ∞	Cir-c 3 Cum-s — ∞	Cir-c, Cir-s SW 5 Cum-s — ∞	—
Cir-c 1 Cir-s W —	1 Cir-s — —	Cir-s 1 Cum-s WNW —	Cir-s 1 Cum WNW —	Cir-s 2 Cum WNW —	Cum 3 Cum-s WNW —	—
Cir-s 7 Cum-s — —	Cir-s 7 Cum-s — —	Cir-s 8 Cum-s — —	Cir-s 8 Cum-s — ○	Cir-s 8 Cum-s — ○	Cum-s 9 Nim — ●	—
10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	10 Str — —	—
1 Cum s — —	1 Cum — —	Cum 1 Cum-s — —	Cum 1 Cum-s — —	1 Cum-s — —	Cir-s 1 Cum-s — —	—
9 Str — —	9 Str — —	9 Str — —	10 Nim — ●	10 Cum-s — —	10 Nim — ●	—
3 Cum-s — —	3 Cum-s — —	Cir-s 4 Cum-s — —	3 Cum-s — —	2 Cum — —	Cir-s 4 Cum — —	2·8
5·9	6·1	6·1	5·9	5·9	6·4	14·3

June 1883—*continued.*

Day.	1	2	3	4	5	6
1	Cir-s 1 Cum-s — —	Cir-s 2 Cum-s — —	Cir-s NW 2 Cum-s — ∞	Cir-s NW 2 Cum-s — —	Cir-s NW 1 Cum-s — —	Cir-s NW 2 Cum-s — —
2	Cum 4 Cum-s — —	Cum-s 5 Nim — —	Cum 7 Cum-s — T ●	Cum-s 7 Nim — —	7 Cum-s — —	7 Cum-s — —
3	Cir-s 7 Cum-s — —	Cum 8 Cum-s — —	Cum 7 Cum-s — —	5 Cum-s — —	4 Cum s — —	Cir-c 5 Cum-s — Mirage
4	Cir, Cir-s 6 Cum, Cum-s WNW —	Cum, Cir-s 8 Cum-s WNW —	8 Cum-s WNW —	9 Cum-s WNW —	9 Cum-s WNW —	8 Cum s WNW —
5	8 Cum-s — —	Cum-s 8 Str — —	Cum-s 7 Str — —	8 Cum-s — —	8 Cum-s — —	Cum-s 9 Str — —
6	10 Cum-s — —	10 Cum-s — —	10 Cum-s — —	10 Nim — ●	9 Nim — ●	Nim 9 Cum-s — ●
7	Cir-s 4 Cum s SSW —	Cir-s 3 Cum-s SSW —	Cir-s 2 Cum-s SSW —	Cir-s, Cir-c 3 Cum-s SSW —	Cir-s, Cir-c 7 Cum-s SSW —	Cum-s 9 Str SSW —
8	10 Cum-s — —	10 Cum-s — —	10 Cum-s — —	Nim 10 Cum-s — ●	9 Cum-s — —	9 Cum-s — —
9	Cum 5 Cum-s — —	Cum 7 Cum-s — —	Cum 7 Cum-s — —	Cum 6 Cum-s NW —	Cum 5 Cum-s NW —	Cum 5 Cum-s NW —
10	Cir, Cir-s 3 Cum, Cum-s NW —	Cum, Cir-s 3 Cum-s NW —	Cum, Cir-s 2 Cum-s NW —	Cum 2 Cum-s NW —	Cum 2 Cum-s NW —	Cum 2 Cum-s NW —
11	3 Cum — —	3 Cum — —	3 Cum — —	2 Cum — —	2 Cum — —	1 Cum — —
12	1 Cir-s — —	1 Cir-s — —	1 Cum — —	1 Cum — —	1 Cum-s — —	1 Cum-s — —
13	Cum-s 9 Str NW —	10 Nim NW ●	Cum-s 9 Str NW —	Cum-s 10 Str NW —	10 Str NW —	10 Str — —
14	Cum-s 9 Str — —	10 Nim — ●	Cum s 9 Nim — —	9 Cum-s — —	9 Cum-s — —	10 Nim — ●
15	Cir-s WNW 9 Cum-s, Str — —	Cir-s WNW 9 Cum-s — —	Cir-s WNW 9 Cum-s — —	Cir-s WNW 9 Cum-s — —	Cir-s WNW 9 Cum-s — —	Cir-s WNW 9 Cum-s — —
16	9 Cum-s NW —	9 Cum-s NW —	9 Cum-s NW —	Cum 5 Cum-s NW —	Cum 6 Cum-s NW —	10 Cum-s — —
17	9 Cum-s — —	7 Cum-s — —	Cum-s 9 Nim — ●	6 Cum-s — —	5 Cum-s — —	Cir-s 5 Cum-s — —
18	Cir-c WSW 7 Cum-s — —	Cir-c WSW 5 Cum-s — —	Cir WNW 6 Cum-s — —	Cum, Cir WNW 5 Cum-s — —	Cir-s, Cir WNW 6 Cum-s — —	Cir-s, Cir WNW 7 Cum-s — —
19	Cir-s W 3 Cum, Cum-s — —	Cum, Cir-s W 3 Cum-s — —	Cum, Cir-s W 3 Cum-s — —	Cum, Cir-s W 3 Cum-s — —	Cum, Cir-s SW 3 Cum-s — —	Cum, Cir-s SW 3 Cum-s — —
20	10 Cum-s W —	10 Nim W ●	10 Cum-s W —	10 Nim W ●	10 Nim W ●	9 Nim W ●
21	Cum-s 9 Nim — ●	Cum-s 9 Nim — ●	Cum 7 Cum-s — —	Cir NW 6 Cum s — —	Cum 6 Cum-s — —	Cum-s 9 Str — —
22	Cum-s 8 Str — —	Cir-c SE 6 Cum-s — —	Cum 6 Cum-s — —	Cum 7 Cum-s — —	Cum 6 Cum-s — —	Cum-s 7 Nim — ●
23	Cum-s 7 Nim — —	Cum-s 8 Nim — ●	Cum-s 8 Nim — ●	8 Cum-s — —	Cir 8 Cum-s — —	Cir 8 Cum-s — —
24	Cir-s S 8 Cum-s — ∞	Cir-s S 8 Cum-s — ∞	Cir-s S 9 Cum-s — ∞	Cir-s WNW 9 Cum-s — ∞	Cir-s 9 Cum-s — ∞	Cir-s, Cir-c SSE 9 Cum-s — ∞
25	Cum 3 Cum-s WNW —	Cum 3 Cum-s WNW —	Cum, Cir-c 4 Cum-s WNW —	Cir-c, Cir-s 5 Cum, Cum-s WNW —	Cum, Cir-c 7 Cum-s WNW —	Cir-s, Cir-c 7 Cum, Cum-s WNW —
26	Cum 9 Cum-s — T	Cum 9 Cum-s NE —	Cum-s 9 Nim E —	Cum-s 9 Nim — —	9 Cum-s — —	9 Cum-s — —
27	10 Str — —	10 Str — —	9 Cum-s — —	Cum 9 Cum-s — —	Cum 6 Cum-s — —	Cum 6 Cum-s — —
28	Cir-s 1 Cum-s — —	Cir-s 1 Cum-s — —	Cir-s 1 Cum-s — —	Cir-s 1 Cum-s — —	Cir-s 1 Cum-s — —	Cir-s 1 Cum-s — —
29	10 Nim — ●	10 Nim — ●	10 Nim — ●	10 Cum-s — —	10 Cum-s — —	10 Cum-s — —
30	Cir-s, Cir 8 Cum — ○	Cir-s, Cir 8 Cum — ○	Cir-s, Cir 7 Cum — —	Cir-s, Cir 8 Cum — ○	Cir-s, Cir 8 Cum-s — —	Cir-s, Cir 8 Cum-s — —
Mean	6·7	6·8	6·7	6·5	6·4	6·8

Sums of Hydrometeors: 56 ●, 3 ▷, 2 ⌴, 23 ∞.

June 1883—*continued.*

7	8	9	10	11	Midnight.	Mean Daily Amount of Cloud.
Cir-c 4 Cum-s — —	5 Cum-s — —	4 Cum-s — —	Cir-c 5 Cum-s, Str — —	Cum-s 3 Str NW —	Cum-s 2 Str NW —	1·7
Cir-c NW 6 Cum-s — —	4 Cum-s — —	4 Cum-s — —	8 Cum-s NW —	Cum-s 7 Str NW —	9 Cum-s NW —	4·4
Cir-c WNW 5 Cum-s — —	Cir-c WNW 6 Cum-s — Mirage	Cir-s WNW 4 Cum-s — Mirage	5 Cum-s — —	Cir-c SW 4 Cum-s — —	3 Cum-s — —	5·9
8 Cum-s WNW —	8 Cum-s — —	Cum-s 7 Str — —	Cum-s 4 Str — —	Cum-s 4 Str — —	Cum-s 4 Str — —	5·6
9 Cum-s — —	10 Str — —	10 Str — —	10 Str — —	Cum-s 10 Str — —	10 Nim — ●	6·8
Cum-s 9 Str — —	Cum-s 9 Str — —	Cum-s 9 Str — —	10 Cum-s — —	10 Cum-s — —	10 Cum-s — —	8·9
Cum-s 9 Str SSW —	Cum-s 9 Str SSW —	Cum-s 9 Str SSW —	Cir-c 10 Cum-s, Str — —	Cum-s 10 Str — —	10 Str — —	7·8
Cum-s 9 Str — —	Cir-c NW 9 Cum-s, Str — —	Cum-s 9 Nim NW ●	Cum-s 9 Str — —	Cum-s 9 Str — —	3 Str — —	9·3
Cum 4 Cum-s NW —	Cum 4 Cum-s NW —	Cir-s NW 6 Cum-s, Str — —	Cum-s 6 Str NW —	Cum-s 9 Nim NW —	9 Cum-s NW —	4·4
Cum 3 Cum-s — —	3 Cum-s — —	Cum-s 3 Str — —	Cum-s 7 Str — —	Cum-s 6 Str — —	Cum-s 3 Str — —	4·8
Cir-s 1 Cum — —	1 Cum — —	1 Cum-s — —	Cum-s 2 Str — —	1 Str — —	1 Str — —	1·7
Cir-s 1 Cum-s — —	Cir-s 1 Cum-s — —	Cir, Cir-s NW 4 Str — —	Cir-s NW 4 Str — —	Cir-s 5 Str — —	Cir-s 6 Str — —	2·5
10 Nim — ●	10 Cum-s — —	10 Cum-s — —	10 Nim — ●	10 Nim NW ●	10 Nim NW ●	9·1
10 Str — —	10 Str — —	10 Nim — ●	Nim 10 Str — ●	Cum-s 10 Str — —	Cum-s 10 Str — —	9·4
Cir-s NW 7 Cum-s — —	8 Cum-s — —	7 Cum-s — —	8 Cum-s — —	9 Cum-s N —	9 Cum-s N —	8·5
Cir-s 8 Cum-s NW —	Cir-s 6 Cum-s NW —	Cir-s 8 Cum-s NW —	Cir-s 8 Cum-s, Str NW —	Cum 8 Cum-s, Str NW —	Cum-s 9 Str NW —	7·2
Cum 5 Cum-s — —	3 Cum-s — —	Cir-s NW 3 Cum-s — —	Cum 5 Cum-s NW —	Cum-s 3 Str NW —	Cum-s 2 Str — —	6·8
Cir, Cir-s WNW 7 Cum-s — —	Cir, Cir-s WNW 8 Cum-s — —	Cir, Cir-s WNW 8 Cum-s — —	Cir-s WNW 6 Str — —	Cir-s WNW 8 Str — —	Cir-s WNW 9 Str — —	7·2
Cum, Cir-s 5 Cum-s — —	Cir-s 4 Cum-s — —	Cir-s 4 Str — —	4 Str NW —	Cum 6 Cum-s, Str NW —	Cum-s 7 Str NW —	4·3
9 Cum-s NW —	10 Cum-s NW —	9 Cum-s NW —	10 Cum-s NW —	10 Cum-s NW —	10 Cum-s NW —	9·7
Cum-s 10 Str — —	9 Cum-s — —	9 Cum-s — —	8 Cum-s — —	Cum-s 9 Str — —	Cum-s 10 Str — —	8·9
Cum-s 8 Nim — ●	Cum-s 9 Nim — —	9 Cum-s SW —	Cum-s 9 Nim SW ●	9 Str SSW —	Cum-s 7 Str SSW —	8·2
Cir-c WNW 8 Cum-s, Str — —	Cum 9 Cum-s, Str — —	Cum-s 9 Str — —	10 Str — —	Cum-s 10 Str — —	8 Cum-s — —	5·4
Cir-c SSE 9 Cum-s — 8	10 Nim — ●	Cum-s 10 Str — —	Cum-s 10 Str — —	Cum-s 10 Nim — ●	9 Cum-s SW —	7·6
Cir-s, Cir-c 8 Cum-s SW —	Cir-s, Cir-c 8 Cum-s SW —	Cir-s 9 Cum-s SW —	9 Cum-s — —	Cum s 9 Str — —	Cum-s 9 Str — —	5·2
Cir-s 9 Cum-s — —	Cum-s 9 Str — —	Cum-s 9 Str — —	Cum-s 9 Str — —	Cum-s 10 Str — K	10 Str — —	7·9
Cum 3 Cum-s — —	Cum-s 1 Str — —	Cum-s 1 Str — —	1 Str — —	1 Cum — —	1 Str — —	7·4
Cir-s 2 Cum-s — —	Cir-s 2 Cum-s — —	2 Str — —	2 Str — —	3 Str — —	6 Str — —	1·1
9 Cum-s NW —	9 Cum-s NW —	Cum-s 8 Str NW —	Cum-s 5 Str — —	2 Str — —	2 Str — —	8·4
Cum-s 10 Str — —	Cum-s 9 Nim — ●	9 Cum-s — —	Cum-s 7 Str — —	9 Cum-s — —	Cum-s 9 Str — —	5·6
6·8	6·8	6·8	7·0	7·1	6·9	6·4

July 1883.

Days.	1		2		3		4		5		6	
1	Cum-s 8 Str	— —	Cum-s 8 Str	— —	Cum 8 Str	— —	Cum 8 Str	— —	Cir-s 8 Cum-s	— —	Cir-s, Cir 8 Cum-s	— —
2	2 Str	— —	3 Str	— —	1 Str	— —	1 Str	— —	1 Str	— —	1 Str	— —
3	Cum-s 9 Str	— —	10 Str	— —	Cum-s 8 Str	— —	Cir-s 7 Str	— —	Cir-s 8 Str	— —	Cir-s 8 Cum	— —
4	4 Str	— —	Cum-s 6 Str	— —	Cir 7 Cum-s	NW —	Cir 8 Cum-s	N —	8 Cum-s	— —	Cum 8 Cum-s	— —
5	Cum 9 Str	NW —	Cum 9 Str	NW —	8 Cum-s	NW —	9 Cum-s	NW —	9 Cum-s	NW —	Cum-s 10 Str	NW —
6	1 Str	— —	2 Str	— —	Cir-c 5 Str	NW —	5 Cum-s	NW —	Cum, Cir-c 5 Cum-s	NW —	4 Cum-s	NW —
7	5 Cum-s	NW —	4 Str	— —	3 Str	— —	Cir-s 3 Str	— —	Cir-s 3 Str	— —	Cir-c 4 Cum-s	NW —
8	Cum-s 6 Str	— —	Cum-s 6 Str	— —	Cir-c 5 Cum-s, Str	N —	Cir-c 6 Cum-s, Str	N —	Cir-c 6 Cum-s, Str	N —	9 Cum-s	— —
9	Cum-s 8 Str	— —	Cum-s 5 Str	— —	Cum-s 8 Str	— —	Cum-s 9 Str	— —	9 Cum-s	— —	9 Cum-s	— —
10	3 Cum-s	— —	3 Cum-s	— —	2 Cum-s	— —	Cum-s 3 Str	— —	Cum-s 6 Str	— —	Cum-s 5 Str	— 8
11	10 Nim	— ●	10 Nim	— ●	10 Nim	—) ●	10 Nim	— ●	10 Nim	— ●	10 Nim	— ●
12	Cum-s 8 Str	— —	Cum-s 7 Str	— —	4 Str	— —	4 Str	— —	Cum-s 4 Str	— —	Cum-s 4 Str	— —
13	4 Cum-s	NW —	4 Cum-s	— —	2 Cum-s	— —	2 Cum-s	— —	3 Cum-s	— —	3 Cum-s	— —
14	Cum-s 9 Str	— —	9 Cum-s	— —	Cum-s, Str 6 Cum-s	— —	Cum 6 Cum-s	— —	Cum, Cir-s 5 Cum-s	— —	Cum 6 Cum-s	— —
15	Cum-s 4 Str	— ≡	Cum-s 4 Str	—))	4 Str	— —	Cir-c 4 Str	ENE —	Cir-c 4 Cum-s	ENE —	Cir-s 4 Cum-s	— —
16	1 Str	— —	1 Str	—))	1 Str	— ⌊	2 Str	— —	1 Cir-s	— —	1 Cir-s	— —
17	Cum-s 4 Str	— —	Cum-s 4 Str	—))	Cum 1 Str	— —	Cum 1 Str	— —	Cum-s 1 Str	— —	1 Cum-s	— —
18	0 —	— —	0 —	— —	0 —	— 8	0 —	— 8	0 —	— 8	0 —	— 8
19	Cir-c 5 Cum-s	— —	Cir-s 5 Cum-s	— —	Cir-c 7 Cum-s	NW —	Cir-c 7 Cum-s	NW —	Cir-c 8 Cum-s	NW —	Cir-s 8 Cum-s	— —
20	10 Str	—) 8	8 Str	— 8	4 Str	— 8	2 Str	— 8	1 Str	— 8	10 Str	— 8
21	10 Str	— 8	10 Str	— 8	10 Str	— —	10 Str	— —	9 Str	— —	Cir, Cir-c 9 Cum-s, Str	— —
22	7 Cum-s	— —	7 Cum-s	— —	9 Cum-s	— —	Cir-c 7 Cum-s	SW —	Cum-s 9 Str	— 8	Cum-s 9 Str	— —
23	Cum-s 10 Str	— —	Cum-s 10 Str	— —	Cum-s 10 Str	— —	Cum-s 9 Str	— —	Cum 9 Cum-s	— —	Cum 6 Cum-s	— —
24	Cum-s 7 Str	— —	Cum-s 7 Str	— —	8 Cum-s	— —	Cum-s 9 Nim	— ●	9 Cum-s	— —	9 Cum-s	— —
25	9 Cum-s	— —	9 Cum-s	— —	Cum-s 9 Str	— —	Cum-s 9 Str	— —	10 Nim	— ●	10 Nim	— ●
26	Cum-s 6 Str	— ≡	Cum 5 Str	— —	Cum-s 3 Str	— —	Cir, Cir-s 2 Str	NW —	Cir-s 2 Str	NW —	Cum-s 3 Str	— —
27	9 Str	— —	10 Str	— —	9 Cum-s	— —	Nim 9 Cum-s	— ●	Cum-s 9 Nim	— ●	Cum-s 9 Nim	— ●
28	4 Cum-s	— —	4 Cum-s	— —	Cum-s 6 Str	— —	9 Str	—) ≈	Cum-s 3 Str	— 8	Cum-s 5 Str	— 8
29	1 Str	— ≡	1 Str	— —	1 Str	— —	1 Str	—)	1 Str	— —	1 Cir-s	— —
30	1 Str	— ≡	2 Str	— —	Cir-s 5 Str	— —	Cir-s 6 Str	— —	Cir, Cir-s 6 Str	— —	Cir, Cir-s 4 Str	— —
31	7 Str	— —	8 Str	— —	9 Str	— —	9 Str	— 8	Cum-s 9 Str	— 8	Cum-s 9 Str	— 8
Mean	5·8		5·8		5·6		5·7		5·7		6·0	

7			8			9			10			11			Noon.			Daily Amount of Downfall.
																		m.m.
Cir-s	NW		Cir-s	NW		Cir-s	NW		Cir, Cir-s	NW		Cir, Cir-s	NW		Cir, Cir-s	NW		
7 Str	—	—	8 Str	—	—	7 Str	—	—	7 Str	—	—	6 Str	—	—	6 Str	—	—	—
0 —	—	—	0 —	—	—	1 Cum	—	—	2 Cum	W	—	Cir-s 3 Cum	W	—	Cir 4 Cum	W	—	—
Cir-s			Cir-s			Cir-s, Cir-c	NW		Cum			Cum			Cum, Cir-s			
8 Cum	—	—	7 Cum	—	—	9 Cum	—	—	9 Cum-s	—	—	9 Cum-s	NW	—	9 Cum-s	NW	—	—
Cum			Cum			Cum												
9 Cum-s	—	—	6 Cum-s	—	—	2 Cum-s	—	—	4 Cum	—	—	4 Cum	—	—	4 Cum	—	—	—
Cum-s			Cum-s			Cum-s						Cir-c			Cum-s			
9 Str	NW	—	9 Str	NW	—	9 Str	NW	—	9 Str	NW	—	8 Cum-s, Str	WNW	—	9 Str	WNW	—	—
Cir-s			Cir-s						Cir	NW & S		Cir	S & WNW		Cir	S		
2 Cum	—	—	2 Cum	—	—	5 Cir-s	SW	—	8 Cum	—	—	8 Cum	—	—	8 Cum	—	—	—
Cir-s	NW		Cir-s	NW		Cir-s, Cir-c	NW		Cir-c	NW		Cum, Cir-c	NW		Cir, Cir-c	NW		3·8
2 Str	—	—	3 Cum-s	—	—	4 Cum-s	—	—	6 Cum-s	—	—	6 Cum-s	—	—	6 Cum, Cum-s	—	—	
8 Cum-s	—	—	9 Cum-s	—	—	9 Cum-s	—	—	Cir, Cir-c	NW		Cir, Cir-c	NW		Cir, Cir-c	NW		—
									8 Cum, Cum-s	—	—	8 Cum, Cum-s	—	—	8 Cum, Cum-s	ENE	—	
Cum			Cum						Cum			Cum			Cum			
9 Cum-s	—	—	8 Cum-s	—	—	3 Cum-s	—	—	4 Cum-s	—	—	3 Cum-s	—	—	6 Cum-s	—	—	—
Cir-s	W		Cir-s	W		Cir-s	W		Cum-s			Cum-s			Cum-s			
4 Cum-s	—	∞	7 Cum-s	—	∞	8 Cum-s, Str	—	∞	9 Str	—	—	9 Str	—	—	10 Str	—	—	—
10 Nim	—	●	10 Nim	—	●	10 Nim	—	●	10 Nim	—	●	10 Nim	—	●	10 Nim	—	●	7·9
Cum			Cum			Cum			Cum			Cum			Cum			
5 Cum-s	—	—	5 Cum-s	—	—	3 Cum-s	—	—	2 Cum-s	—	—	2 Cum-s	—	—	2 Cum-s	—	—	1·1
Cum			Cum			Cum			Cum			Cum			Cum			
2 Cum-s	—	—	4 Cum-s	—	—	6 Cum-s	ESE	—	9 Cum-s	ESE	●	8 Cum-s	—	—	8 Cum-s	—	—	—
Cum			Cir-s	ESE		Cir-s	ESE		Cir-c			Cir-c			Cir-c			
7 Cum s	—	—	7 Cum	—	—	8 Cum	NE	—	8 Cum	NE	—	8 Cum	NE	—	8 Cum	NE	—	—
8 Cum	—	—	8 Cum-s	NE	—	8 Cum	NE	—	8 Cum	NE	—	Cir-c 7 Cum	ENE	—	Cir-c 8 Cum	—	—	—
1 Cir-s	—	—	1 Cum	—	—	2 Cum	—	—	2 Cum	—	—	3 Cum	—	—	3 Cum	—	—	—
1 Cum-s	—	—	1 Cum-s	—	—	2 Cum	—	—	3 Cum	—	—	4 Cum	—	∞	4 Cum	—	∞	—
1 Cir-s	—	∞	1 Cir-s	—	∞	Cir-s 1 Cum	—	∞	2 Cum	—	∞	3 Cum	—	∞	3 Cum	—	∞	—
Cum-s			Cum-s			Cum-s			Cum-s			Cum-s			Cum-s			
9 Str	—	∞	9 Str	—	∞	10 Str	—	∞	10 Str	—	∞	10 Str	—	∞	9 Str	—	∞	—
4 Str	—	∞	4 Str	—	∞	3 Str	—	∞	Cir-s 4 Str	—	∞	Cir-s 3 Str	—	∞	Cir-s 5 Str	—	∞	—
Cir-c			Cir-c			Cir-s			Cir-c	SW		Cir-s, Cir-c	SW		Cir	S		
9 Str	—	∞	9 Cum-s	—	∞	9 Cum-s	—	∞	9 Cum-s	—	∞	9 Cum-s	—	∞	9 Cum-s	—	∞	—
10 Str	—	—	Cum 9 Cum-s	—	—	Cum 8 Cum-s	—	—	Cir-c, Cir-s 7 Cum, Cum-s	SSW —	—	Cum-s 10 Str	—	—	Cum-s 9 Str	—	—	—
Cir-c	SW		Cir-c	SW		Cir-c	SW		Cir-c, Cir-s	SW		Cir-s	SW		Cir-s	SW		
6 Cum-s	—	—	6 Str	—	—	5 Str	—	—	6 Cum, Str	—	—	5 Cum-s	—	—	6 Cum	—	—	—
9 Cum-s	—	—	Cum 9 Cum-s	—	—	Cum 9 Cum-s	—	—	Cum 8 Cum-s	—	—	Cum 8 Cum-s	—	—	Cum 8 Cum-s	—	—	0·4
10 Nim	—	●	10 Nim	—	●	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	0·8
Cum-s			Cum-s			Cum-s												
8 Str	—	—	9 Str	—	—	9 Str	—	—	9 Cum-s	—	—	9 Cum	—	—	8 Cum	—	—	—
Cum-s						Cir-c			Cir-c	WNW		Cir-c	WNW		Cir-c	WNW		
9 Nim	—	●	6 Cum-s	—	—	7 Cum-s	—	—	7 Cum	—	—	8 Cum	—	—	7 Cum	—	—	0·9
1 Cum	—	—	2 Cum	—	—	2 Cum	—	—	2 Cum	—	—	3 Cum	—	—	3 Cum	—	—	3·9
1 Cir-s	—	—	1 Cir-s	—	—	1 Cir-s	—	—	1 Cir-s	—	—	1 Cir-s	—	—	1 Cir-s	—	—	—
Cir			Cir-s			Cir-s			Cir			Cir			Cir			
2 Cir-s	—	—	2 Cum	—	—	2 Cum-s	—	—	2 Cir-s	—	—	2 Cir-s	—	—	2 Cir-s	—	—	—
Cum-s			Cum-s			Cum-s			Cum-s			Cum-s			Cum-s			
9 Str	—	∞	9 Str	—	∞	10 Str	—	∞	10 Str	S	∞	9 Str	S	∞	8 Cum	S	∞	—
5·8			5·8			5·9			6·3			6·3			6·5			18·8

July 1883—*continued.*

Day.	1			2			3			4			5			6		
1	Cir 7 Cir-s	—	—	Cir 7 Cir-s	SW	—	Cir 7 Cir-s	—	—	Cir 6 Cir-s	—	—	Cir 4 Cir-s	SW	—	Cir 3 Cir-s	SW	—
2	Cir 5 Cum	W	—	Cir-s 6 Cum	W	—	Cir-s 6 Cum	W	—	Cir-s, Cum 7 Cum-s	W	—	Cir-s, Cum 7 Cum-s	W	—	Cir-s 8 Cum	W	—
3	10 Nim	—	●	Cum-s 10 Nim	—	●	Cum 9 Cum-s	—	—	Cum 9 Cum-s	—	—	Cum, Cir-c 9 Cum-s	NW —		Cum, Cir-s 8 Cum-s	—	—
4	4 Cum	—	—	4 Cum	—	—	4 Cum	—	—	3 Cum	—	—	3 Cum	—	—	Cum 3 Cum-s	—	—
5	Cum-s 8 Str	WNW	—	9 Cum-s	WNW	—	8 Cum-s	WNW	—	8 Cum-s	WNW	—	8 Cum-s	WNW	—	7 Cum-s	WNW	—
6	Cir-s 9 Cum	SW	—	Cir-s 9 Cum-s	SW	—	Cir-s 9 Cum	SW	—	Cir-s 9 Cum-s	SW	—	Cir-s 9 Cum-s	—	—	Cum-s 9 Str	—	—
7	Cir, Cir-c 5 Cum, Cum-s	NW —	—	Cir, Cir-c 6 Cum, Cum-s	NW —	—	Cir, Cir-c 8 Cum, Cum-s	NW —	—	Cir, Cir-c 7 Cum-s	NW —	—	Cir, Cir-c 4 Cum-s	NW —	—	Cir-c 6 Cum-s	NW —	—
8	Cir 7 Cum-s, Cum	NW ENE	—	Cir-c, Cum 7 Cum-s	—	—	Cum 8 Cum-s	—	—	8 Cum-s	—	—	8 Cum-s	—	—	7 Cum-s	—	—
9	Cum 7 Cum-s	—	—	Cum 6 Cum-s	—	—	Cum 5 Cum-s	—	—	Cum 4 Cum-s	—	—	3 Cum	—	—	3 Cum	—	—
10	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Nim	—	●	10 Nim	—	●
11	10 Nim	—	●	10 Nim	—	—	10 Cum-s	—	—	10 Cum-s	—	—	10 Cum-s	—	—	10 Cum-s	—	—
12	Cum 1 Cum-s	—	—	Cum 1 Cum-s	—	—	Cum 1 Cum-s	—	—	Cum 1 Cum-s	—	—	2 Cum	—	—	5 Cum	—	—
13	Cum 8 Cum-s	—	—	Cum 8 Cum-s	E	—	Cum 7 Cum-s	E	—	Cum 7 Cum-s	E	—	Cum 7 Cum-s	E	—	Cum 8 Cum-s	E	—
14	Cir-c 8 Cum	NE	—	Cir-c 8 Cum	NE	—	Cir-c 8 Cum	NE	—	Cir-s 8 Cum	—	—	Cir, Cir-s 7 Cum	—	—	Cir, Cir-s 7 Cum	—	—
15	4 Cum	—	—	7 Cum	NE	—	6 Cum	NE	—	Cir-s 6 Cum	NE	—	Cir-s 4 Cum	—	—	Cir-s 3 Cum	—	—
16	3 Cum	—	—	3 Cum	—	—	3 Cum	—	—	2 Cum	—	—	2 Cum	—	—	2 Cum	—	—
17	4 Cum	—	—	3 Cum	—	—	3 Cum	—	—	2 Cum	—	—	2 Cum	—	—	2 Cum	—	—
18	Cir-s 3 Cum	—	∞	Cir-s 3 Cum	—	∞	Cir-s 4 Cum	—	∞	Cir-s, Cir 6 Cum	SW —	∞	Cir-s, Cir 9 Cum	WSW —	—	Cir-s, Cir 9 Cum	—	—
19	Cir-c 5 Cum, Cum-s	NW —	∞	Cir-c 4 Cum, Cum-s	NW —	∞	Cir-c 5 Cum, Cum-s	NW —	∞	Cum 8 Cum-s	—	∞	Cir-s 6 Cum, Cum-s	—	∞	Cum-s 6 Str	—	∞
20	Cir-s 5 Str	—	∞	Cir-s 5 Str	—	∞	Cir-s 6 Str	—	∞	Cir-s 6 Str	—	∞	Cir-s 7 Str	—	∞	Cir-s 8 Str	—	∞
21	Cir-s 9 Cum-s	—	∞	Cir-s 9 Cum-s	—	∞	Cir-s 9 Cum-s	—	—	Cir-s 9 Cum-s	—	—	Cir-s 9 Cum-s	—	—	Cir-s 9 Cum s, Str	—	—
22	Cum-s 10 Str	—	—	Cir-s, Cir-c 7 Cum, Cum-s	SSW —	—	Cir-s, Cir-c 5 Cum	WSW —	—	Cir-s 4 Cum	WSW —	—	Cir-s 5 Cum	SW —	—	Cir-s, Cir-c 6 Cum	SSW —	—
23	8 Cum	—	—	Cum 8 Cum-s	—	—	Cum 9 Cum-s	—	—	Cum-s 9 Nim	—	●	Cum-s 9 Nim	—	—	Cum-s 9 Nim	—	—
24	Cum 8 Cum-s	—	—	Cir 7 Cum	WNW —	—	6 Cum	—	—	Cir-c 7 Cum	WNW —	—	Cir-c 6 Cum	WNW —	—	Cum 7 Nim	—	●
25	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—
26	8 Cum	—	—	Cir-s 8 Cum	WNW —	—	Cir-s 8 Cum	WNW —	—	Cir-s 9 Cum	—	—	Cir-s 9 Cum-s	—	—	Cir-s, Cir-c 8 Cum-s	—	—
27	Cum 9 Cum-s	—	⊤	Nim 9 Cum-s	—	⊼ ●	Nim 10 Str	—	●	Cum-s 10 Nim	—	●	Cum-s 10 Nim	—	●	Cum-s 9 Nim	—	●
28	3 Cum	—	—	2 Cum	—	—	2 Cum	—	—	2 Cum	—	—	Cum 2 Cum-s	—	—	Cum 1 Cum-s	—	—
29	1 Cir-s	—	—	Cir 1 Cir-s	NW —	—	Cir 2 Cir-s	NW —	—	Cir 2 Cir-s	NW —	—	Cir 3 Cir-s	—	—	Cir 2 Cir-s	—	—
30	Cir-s 2 Cum s	—	—	Cir-s 2 Cum-s	—	—	Cir-s 2 Cum-s	—	—	Cir-s 2 Cum-s	—	—	Cir-s 3 Cum-s	—	—	Cir, Cir-s 6 Cum-s	SW —	—
31	Cir-c 1 Cum, Cum-s	S —	—	Cir-c 4 Cum-s	S —	—	Cir-c 4 Cum-s	S —	—	Cir-c 4 Cum-s	S —	—	Cir-s, Cir-c 2 Str	—	—	Cir-s 7 Str	—	—
Mean	6·4			6·2			6·3			6·3			6·1			6·4		

Sums of Hydrometeors: 46 ●, 10 ⌓, 1 ⌙, 96 ∞, 1 ≋.

7	8	9	10	11	Midnight.	Mean Daily Amount of Cloud.
Cir 3 Cir-s WSW — Cum-s 9 Nim NW ● Cir-s, Cir-c NW 6 Cum, Cum-s — — 2 Cum — —	Cir 3 Cir-s WSW — Cum-s 9 Nim NW ⟆ ● Cir-s NW 7 Cum, Cum-s — — 2 Cum — —	Cir 3 Cir-s W — Cum-s 9 Nim NW ● Cum 4 Cum-s — ⌒ 2 Str — —	Cir-s W 4 Str — — Cum 9 Cum-s — — Cum 5 Cum-s — — 3 Str — —	Cir-s W 5 Str — — Cum-s 10 Str NW — 5 Cum-s — — 1 Str — —	4 Str — —	6·0
Cir-c 8 Cum-s WNW — 10 Cum — ● ⟆ Cir-s NW 7 Cum-s — — 8 Cum-s — — Cum 5 Cum-s NW —	8 Cum-s NW — Cum-s 9 Str — — Cir-s, Cir-c NW 6 Cum-s — — Cum 9 Cum-s — — Cir-s 3 Cum, Cum-s NW —	7 Cum-s NW ○ Cum-s 7 Str — ⌒ T ○ Cir-c NW 8 Cum-s — — Cum 9 Cum-s — — Cir, Cir-s 6 Cum-s NW —	4 Cum-s — — Cir-c NW 4 Cum-s, Str — — Cum-s 8 Str — — Cum 9 Cum-s — ⊃ Cir-s, Cum 4 Cum-s WNW —	Cum-s 1 Str — — Cum-s 9 Nim — ⟆ Cum-s 8 Str — — Cum-s 9 Str — — 3 Cum-s — —	1 Str — —	7·7
Cum-s 10 Str — — 10 Cum-s — — 6 Cum — — 7 Cum-s NE — Cir, Cir-s 6 Cum — —	10 Nim — ● Cum-s 9 Str SE — Cum 6 Cum-s — — 7 Cum-s NE — Cir-s 6 Cum-s — —	Nim 10 Str — ● Cum-s 9 Str SE — Cum 6 Cum-s — — 7 Cum-s NE — Cir-s 5 Cum-s NNE —	Cum-s 10 Nim — — 10 Str SE — Cum 8 Cum-s — — 8 Cum-s NE — Cum-s 6 Str — —	Nim 10 Str — ● 10 Str — — 6 Cum-s NW — Cum-s 8 Str — — Cum-s 5 Str — ⊟	7 Str — — 10 Nim — ● 10 Str — — 5 Cum-s NW — Cum-s 9 Str — — Cum-s 6 Str NNE —	7·9 9·9 4·1 6·1 7·0
2 Cum — — 2 Cum-s — — 2 Cum-s — ⊗ Cir, Cir-s WSW 7 Cum — — Cir-s 9 Cum-s — ⊗	Cum-s 1 Str — — 3 Cum-s — — 2 Cum-s — ⊗ Cir, Cir-s WSW 8 Cum-s — — 9 Cum-s — ⊗	Cum-s 2 Str — — 2 Cum-s — — 1 Cum-s — ⊗ Cir-s 7 Cum-s — — 10 Cum-s — ⊗	1 Str — — Cum-s 4 Str — — Cum-s 2 Str — ⊗ 6 Cum-s — — 10 Cum-s — ⊗	1 Str — — Cum-s 4 Str — — 1 Str — ⊗ 4 Cum-s — — 10 Cum-s — ⊗	1 Str — — Cum-s 5 Str — ⊟ 1 Str — ⊗ ⊟ 5 Cum-s — — 9 Str — ⊗	4·5 2·2 2·2 3·4 7·8
Cir-s 9 Str — ⊗ Cum-s 8 Str — — Cir-s SSW 7 Cum — — Cum 8 Cum-s — — Cum, Cir-c NW 6 Cum-s — —	Cir-s 7 Str — ⊗ Cir-c, Cir-s SSW 7 Cum-s, Str — — Cir SSW 5 Cum-s — — Cum 9 Cum-s — — Cir-c NW 5 Cum-s, Str — —	Cum 8 Str — ⊗ Cir-c SSW 5 Cum-s, Str — — 5 Cum-s — — Cir-c SW 9 Cum-s — — Cir-s NW 4 Str — —	9 Str — ⊗ 4 Str — — Cum-s 8 Nim — ● Cum-s 9 Str — — Cum-s 8 Str — —	7 Str — ⊗ 5 Cum-s — — Cum-s SW 8 Nim — ⊟ Cum-s 5 Str — ⊟ Cum-s 8 Str — —	8 Str — ⊗ 5 Cum-s — — Cum-s 9 Str — — Cum-s 9 Str — — 8 Cum-s — —	6·0 8·3 7·5 7·9 7·5
9 Str — — Cir-c NW 8 Cum-s — — Cir-s, Cir-c NW 8 Cum-s, Str — ⌒ 1 Cum — — Cir 3 Cir-s — —	9 Str — — Cir-c 8 Cum-s NW — Cum-s 9 Str — — 1 Cum — — Cir 3 Cir-s — —	9 Str — — Cum-s 2 Str NW — Cum-s 10 Str — — 1 Cum — — Cir-s 5 Str — —	8 Str — — Cum-s 9 Str NW — Cum-s 9 Str — — 1 Cum — ⊃ 5 Str — ⊃	Cum-s 8 Str — — Cum-s 10 Str — — 9 Nim — ● 1 Str — ⊟ 1 Str — ⊟	Cum-s 3 Str — ⊟ 10 Str — ● 9 Cum-s — — 1 Str — ⊟ 1 Str — ⊟	9·2 7·4 8·7 2·6 1·7
Cir-s, Cir-c SW 7 Cum-s — — Cir-s 8 Str — ⊗	Cir-s 8 Str — — Cir-s 9 Str — ⊗	Cir-s 5 Str — — Cir-s 8 Str — ⊗	3 Str — — Cir-s 7 Str — ⊗	7 Str — — 7 Str — ⊗	7 Str — ⊟ 6 Str — ⊗	3·7 7·4
6·5	6·4	6·2	6·3	6·0	6·1	6·1

August 1883.

Day.	1			2			3			4			5			6		
1	8 Str	—	∞	8 Str	—	∞	Cir-s 4 Str	—	∞	Cir-s 5 Str	—	∞	3 Str	—	∞	2 Str	—	∞
2	Cum-s 9 Str	—	∞	Cum-s 8 Str	SW	∞	Cum-s 8 Str	SW	∞	Cum-s 9 Str	SW	∞	Cum-s 9 Str	SW	∞	10 Nim	SW	●
3	10 Nim	—	⊤	10 Nim	—	—	10 Str	—	∞ ⊼	Nim 10 Str	—	●	10 Nim	—	●	Nim 10 Str	—	●
4	Cum 7 Cum-s	—	≡	Cum 7 Cum-s	—	—	Cum 8 Cum-s	SW	—	Cum 4 Str	SW	—	Cum 1 Str	—	—	4 Cum	WSW	—
5	0 —	—	≡	Cir-s 4 Str	—	≡	Cir-s 6 Str	—	—	Cir-s 8 Str	—	○ ⊃	Cir, Cir-c 8 Str	—	—	Cir, Cir-s 7 Str	—	—
6	10 Cum-s	—	—	10 Cum-s	—	—	10 Str	—	∞	10 Str	—	∞	10 Str	—	∞	10 Nim	—	●
7	Cir-s 8 Cum-s, Str	—	—	Cum-s 9 Str	—	—	Cum-s 10 Str	—	—	Cum-s 9 Str	—	—	Cir, Cir-s 7 Cum-s, Str	NW —	—	Cir,Cir-c,Cir-s 7 Cum, Cum-s	NW —	—
8	10 Str	—	—	10 Str	—	●	10 Nim	—	●	10 Nim	—	●	10 Nim	—	●	9 Nim	—	●
9	8 Cum-s	NW	—	8 Cum-s	NW	—	9 Cum-s	NW	—	8 Cum-s	NW	—	Cum 7 Cum-s	NW	—	Cum 6 Cum-s	NW	—
10	Cir-s 3 Str	—	∞	Cir-s 5 Str	NW —	∞	1 Str	—	—	Cir-s 3 Str	NW —	—	Cir-s 1 Str	NW —	⊃	Cir-s 2 Cum	NW —	∞
11	9 Str	—	—	Cum-s 9 Str	NW	—	Cum-s 9 Str	NW	∞	Cir-c 9 Cum-s	NW	∞	8 Str	NW	∞	8 Str	NW	∞
12	Cum-s 7 Str	—	≡	9 Str	—	—	Cum-s 8 Str	—	∞	Cum-s 9 Str	—	∞	Cum-s 8 Str	—	—	Cum 8 Cum-s	—	⊃ ∞
13	2 Str	—	∞ ≡	4 Str	—	≡ ∞	Cum 8 Cum-s	SSW	—	Cum 9 Cum-s	—	∞	Cum-s 10 Str	—	⊃ ∞	10 Str	—	∞
14	4 Str	—	≡	Cum-s 3 Str	—	≡	6 Str	—	—	9 Cum-s	—	—	9 Cum-s	—	—	Cum-s 9 Str	—	—
15	Cum-s 9 Str	—	—	Cum-s 9 Str	—	—	Cum-s 8 Str	—	—	Cum-s 9 Str	—	—	10 Str	—	—	Cum 8 Cum-s	—	—
16	3 Str	—	≡	5 Str	—	⊃	6 Str	—	—	Cir-s 9 Str	—	—	10 Str	—	—	10 Str	—	—
17	10 Nim	—	●	10 Nim	—	●	10 Str	—	—	10 Nim	—	●	10 Nim	—	●	9 Str	—	—
18	1 Str	—	≡	1 Str	—	≡	1 Str	—	—	2 Str	—	⊃	Cir-s 3 Str	—	—	Cir-s 3 Str	—	—
19	Cir-c 3 Str	—	∈	Cir-s 3 Str	—	∈	4 Str	—	—	Cir-s 8 Cum-s, Str	—	⊃	Cir-c 9 Cum-s, Str	—	)	10 Nim	—	) ●
20	10 Str	—	—	Cir-c 8 Cum-s, Str	NNW —	—	Cum-s 9 Str	—	—	Cum-s 9 Str	—	—	Cir-s 9 Str, Cum	S —	—	Cir-s 8 Cum, Str	S —	—
21	2 Str	—	—	1 Str	—	—	1 Str	—	⊐	1 Str	—	—	Cum 2 Str	—	—	Cum 2 Str	—	—
22	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	10 Str	—	—	Cum-s 9 Str	—	—
23	1 Str	—	≡	1 Str	—	—	2 Str	—	—	Cir-s 4 Str	—	—	Cir-s 4 Cum-s	—	—	Cir-s 2 Cum	—	—
24	2 Str	—	≡	Cir-s 4 Str	—	≡	Cir-s 6 Str	—	⊐	Cir-s 6 Str	—	⌊	Cum-s 9 Str	—	)	Nim 9 Str	—	●
25	Nim 10 Str	—	● ≡	Cum-s 9 Str	—	—	Cum-s 10 Str	—	—	Cum-s 7 Str	—	—	Cir-s, Cir-c 8 Cum-s, Str	W —	—	Cir-c 8 Cum-s	WSW —	—
26	0 —	—	≡	0 —	—	≡	1 Str	—	⊃ ≡	4 Str	—	—	4 Str	—	—	5 Str	—	—
27	2 Str	—	—	5 Cum-s	W	—	7 Cum-s	SW	—	8 Cum-s	SW	—	8 Cum-s	SW	—	8 Cum-s	SW	—
28	1 Str	—	≡	1 Str	—	≡	1 Str	—	—	Cum 1 Str	—	⊃	Cum 1 Str	—	—	Cum 1 Str	—	—
29	Cum-s 4 Str	—	≡	2 Str	—	—	2 Str	—	—	1 Str	—	—	2 Str	—	—	2 Str	—	—
30	9 Cum-s	—	—	9 Cum-s	—	—	9 Str	—	—	9 Str	—	—	7 Cum-s	SE —		9 Cum-s	SE —	
31	1 Str	—	—	4 Str	—	—	3 Str	—	—	2 Str	—	—	1 Str	—	—	1 Str	—	—
Mean	5·6			6·0			6·4			6·8			6·8			6·8		

7	8	9	10	11	Noon.	Daily Amount of Downfall.
						m.m.
3 Cir-s — ∞	3 Cir-s — ∞	3 Cir-s — ∞	3 Cir-s — ∞	3 Cir-s — ∞	4 Cir-s SW ∞	—
Cum-s	Cum	Cir-c SW	Cir-c SW	Cir-s, Cir-c SW		
10 Str SW ∞	9 Cum-s SW ∞	9 Cum-s — ∞	7 Cum — ∞	7 Cum — ∞	7 Cir S & SW ∞	0·3
Cum-s	Cum-s	Cum-s	Cum-s	Cir-c	Cum-s	
8 Str — ∞	9 Str — ∞	8 Str SW ∞	6 Str SW ∞	4 Cum-s, Str SW ∞	4 Str SW ∞	0·5
4 Cum WNW —	6 Cum WNW —	8 Cum — —	8 Cum — —	7 Cum — —	5 Cum — —	8·2
Cir NW	Cir NW	Cir NW	Cir NW	Cir NW	Cir NW	
7 Cir-s — —	6 Cir-s — —	6 Cir-s — —	6 Cir-s — —	6 Cir-s — —	4 Cir-s — —	—
10 Str — ∞	Cum-s	Cir-s WNW	Cir-s SSE	Cir-s SSE	Cir-s SSE	
	9 Str — ∞	7 Cum-s, Str — ∞	6 Cum-s — ∞	5 Cum-s — ∞	6 Cum-s, Cum — ∞	0·6
Cir-s NW	Cir-s NW		Cir-s NW	Cir-s NW	Cir-s NW	
7 Str — —	7 Cum, Str — —	8 Cum-s — —	8 Cum-s — —	7 Cum — —	4 Cum — —	4·6
9 Nim — ●	Cum		Cir-c W	Cum	Cum	
	8 Cum-s S —	9 Cum-s SE —	9 Cum, Cum-s — —	9 Cum-s — —	8 Cum-s — —	0·5
Cum	Cum	Cir-c NW	Cir-c NW	Cir, Cir-c NW	Cir-s, Cir-c NNW	
9 Cum-s NW —	7 Cum-s NW —	5 Cum, Cum-s — —	6 Cum, Cum-s — —	6 Cum, Cum-s — —	8 Cum — —	0·1
Cir-s NW			Cir-s, Cir-c NW	Cir-s, Cir-c NW	Cir-s NW	
2 Cum — ∞	3 Cir-s NW ∞	3 Cir-s NW ∞	6 Str — ∞	8 Str — ∞	8 Str — ∞	—
Cum	Cir-s NW ∞	Cir-c	Cir-c	Cir-c	Cir-c	
8 Cum-s — ∞	9 Cum-s —	8 Cir-s NW ∞	5 Cir-s NW ∞	3 Cir-s NW ∞	3 Cir-s NW ∞	—
Cum	Cum-s	Cum	Cir-s S	Cir-s, Cir-c S	Cir-s S	
8 Cum-s S ∞	9 Str S ∞	8 Cum-s S ∞	4 Cum, Cum-s — ∞	3 Cum — ∞	2 Cum — ∞	—
10 Nim — ∞ ●	10 Str — ∞	10 Cum-s — ∞	10 Nim — T ● ∞	10 Nim SSE ● ∞	10 Nim SSE ● ∞	—
Cum-s	Cum-s	Nim	Cum-s	Cum-s	Nim	
9 Str — —	10 Str — —	10 Str — ●	10 Str — —	10 Str — —	10 Str — ●	1·5
Cir-c NW	Cir-c NW	Cir-c NW				
4 Cum, Cum-s — —	6 Cum-s — —	6 Cum — —	4 Cum — —	4 Cum — —	4 Cum — —	1·9
9 Str — —	10 Str — —	10 Cum-s — —	10 Cum-s — —	10 Str — —	10 Cum-s — —	—
Cum-s	Cum-s	Cum-s	Cum-s	Cum-s	Cir-c SW	
9 Str — —	8 Str — —	8 Str — —	8 Str — —	7 Str — —	7 Cum-s, Str — —	5·3
Cir-s	Cir-s	Cir-s	Cir-s	Cir-s	Cir-s	
2 Str — —	2 Cum — —	2 Cum — —	2 Cum — —	2 Cum — —	2 Cum — ○ ∞	—
9 Nim WNW ●	10 Nim — ●	10 Nim — ●	10 Nim NW ●	Cir-s	9 Cum-s — —	3·0
Cir-s	Cir-s	Cir-s, Cir-c	Cir SE	9 Cum-s — —	Cir SE	
7 Cum — —	8 Cum — —	7 Cum — —	7 Cum — —	Cir-c, Cir SE	7 Cum — —	1·8
Cir-s	Cir-s			7 Cum — —	Cir-s NW	
2 Cum — —	2 Cum — —	2 Cir-s — —	1 Cir-s — —	Cir-s NW	1 Cum — —	—
9 Str NW —	9 Str NW —	8 Str NW —	9 Str N —	1 Cum — —	Cir-s	
				Cir-c	8 Cum, Str — —	—
Cir-s	Cir-s	Cir-s	Cir-s	7 Cum, Str — —	Cir-s, Cir WSW	
2 Cum — ▷	2 Cum — —	2 Cum — —	4 Cum — —	Cir-s, Cir	5 Cum — —	—
Cum-s	Cir-c W	Cir,Cir-c,Cir-s W	Cir,Cir-c,Cir-s W	Cum-s W	Cir,Cir-c,Cir-s W	
9 Str — —	8 Cum-s, Str — —	8 Cum-s — ○	7 Cum-s — —	10 Str — ○	9 Cum, Cum-s — —	—
9 Cum-s WSW —	8 Cum-s WSW —	8 Cum-s WSW —	9 Cum-s WSW —	8 Cum SW —	8 Cum SW —	1·8
Cir-s, Cir SW	Cir-s, Cir	Cir-s, Cir	Cir-s NW	Cir-c SW	Cir-c SW	
6 Cum-s — —	6 Cum-s — —	3 Cum-s — —	2 Cum-s — —	2 Cum-s — —	6 Cum-s — —	—
9 Cum-s SW —	Cir-s	Cir-s, Cir-c	Cir-s, Cir-c	Cir-s, Cir-c	Cir-s, Cir-c	
	5 Cum-s SW —	7 Cum-s WSW —	8 Cum-s W ∞	9 Cum-s W —	8 Cum-s W —	—
Cir-s	Cir-s	Cir-s	Cir-s	Cir-s	Cir-s	
2 Cum-s — —	2 Cum-s — —	2 Cum — —	2 Cum — —	3 Cum — —	2 Cum — —	—
Cir-c NW	Cir-s, Cir-c NW	Cir-s, Cir-c NW	Cir-s, Cir-c NW	Cir-s, Cir-c NW	Cir-s, Cir WNW	
4 Cum-s — —	6 Cum-s — —	6 Cum — —	7 Cum — —	7 Cum — —	7 Cum — —	—
10 Str — —	10 Str — —	Cir-c SE	Cum-s	10 Str — —	10 Str — —	—
		9 Cum-s, Str — —	10 Str — ○			
1 Str — —	1 Cum — —	Cir-s	Cir-s	Cir-s, Cir-c N	Cir-s, Cir-c N	
		2 Cum — —	2 Cum — —	3 Cum — —	3 Str — —	0·5
6·7	6·8	6·5	6·3	6·2	6·1	30·6

August 1883—*continued.*

Day.	1	2	3	4	5	6
1	5 Cir-s SW ∞	Cir 4 Cir-s SW ∞ Cir, Cir-s SW	4 Cir-s SW ∞ Cir-c	Cir-s SW 3 Cum ∞ Cir-c, Cir-s SW	Cir-s SW 3 Cum — ∞ Cir-s SW	Cir-s 4 Cum-s — ∞ Nim
2	Cir 7 Cir-s SW ∞	8 Cum — ∞	7 Cir-s SW ∞ Cum —	7 Cum — ∞	10 Cum-s — ∞	10 Str — ∞ Cir-s SW
3	5 Cum SW ∞	8 Cum SW ∞	8 Cum-s SW ∞	4 Cum SW ∞	4 Cum SW ∞	4 Cum — ∞
4	6 Cum — —	6 Cum — —	6 Cum — —	5 Cum — —	4 Cum — —	3 Cum — —
5	Cir-s, Cir-c SW 8 Cum — —	Cir, Cir-c, Cir-s SW 7 Cum — —	Cir, Cir-s WSW 8 Cum — — Cum —	Cir, Cir-c, Cir-s WSW 8 Cum — — Cum-s	Cir-s, Cir WSW 7 Cum-s — — Cir-s, Cir-c	Cir-s, Cir-c WSW 7 Cum-s — — Cir-s, Cir-c SW
6	Cum, Cir-s SSE 4 Cum-s — ∞	Cum, Cir-s SSE 7 Cum-s — ∞ ⊤	9 Cum-s — ∞	9 Nim — ∞ ☈ ●	6 Cum-s — ∞	8 Cum, Cum-s — ∞
7	Cir-s NW 4 Cum — —	Cir-s, Cir NW 4 Cum — —	Cir-s, Cir NW 3 Cum — —	Cir-s, Cir NW 4 Cum — —	Cir-s, Cir NW 3 Cum — —	Cir NW 2 Cum — —
8	Cum 7 Cum-s NW —	Cum 4 Cum-s — —	Cum 6 Cum-s — ●	Cum 6 Cum-s — —	Cum 7 Cum-s — —	Cum 6 Cum-s —)
9	Cir-s WNW 9 Cum, Cum-s — —	Cir, Cir-c NNW 8 Cum, Cum-s — —	Cir-s NW 9 Cum, Cum-s — —	10 Cum-s — —	10 Cum-s — —	10 Str — —
10	Cir-s NW 8 Str — ∞	8 Str — ∞	8 Str WNW ●	8 Cum-s WNW —	Cir-s 7 Cum-s WNW —	Cir-s, Cir-c 7 Cum-s WNW —
11	Cir-c NW 4 Cir-s — ∞	Cir-s 3 Cum — ∞	1 Cum — ∞	1 Cir-s — ∞	1 Cir-s — ∞	3 Cir-s — ∞
12	Cir-s 3 Cum-s — —	Cir-s 3 Cum-s S ∞	Cir 2 Cir-s S ∞	Cir, Cir-c 3 Cir-s SSW ∞	Cir-s, Cir-c, Cir 6 Cum-s SSW ∞	Cir-s, Cir-c, Cir 6 Cum-s SSW ∞
13	10 Nim SW ∞ ●	7 Str SW ∞	Cum 7 Cum-s SW ∞	Cum 6 Cum-s SW ∞	6 Cum SSW ∞	7 Cum SW ∞
14	10 Nim — ●	10 Nim — ●	10 Nim — ●	Cum-s 10 Nim — ●	10 Nim — ●	Cum-s 10 Nim — ●
15	Cir-s 3 Cum — —	Cir-s, Cir SW 4 Cum — —	Cir-s 4 Cum — —	Cir-s, Cir WSW 5 Cum — —	Cir-s, Cir WSW 5 Cum — —	Cir-s, Cir WSW 3 Cum — —
16	10 Cum-s — —	10 Cum-s — —	10 Nim — ●	10 Str — —	10 Str — —	10 Str — —
17	Cum-s 8 Str WSW —	Cum-s 9 Str WSW —	Cum-s 8 Str WSW —	Cum-s 8 Str WSW —	Cum-s 8 Str WSW —	Cum-s 8 Str WSW —
18	Cir-s SW 3 Cum — ∞	Cir-s, Cir-c SW 4 Cum — ∞	Cir-s SW 3 Cum — ∞	Cir-s SW 3 Cum — —	Cir-s, Cir-c SW 3 Cum — ○	Cum, Cir-s SW 4 Cum-s — —
19	10 Cum-s — —	10 Nim — ●	10 Cum-s — —	10 Cum-s — —	10 Str — —	10 Str — —
20	Cir SE 7 Cum — —	Cir SE 7 Cum — —	7 Cum — —	7 Cum — —	7 Cum — —	Cum 7 Cum-s — —
21	Cir-s NW 2 Cum — —	Cir-s NW 2 Cum — —	Cir-s NW 2 Cum — —	Cir-s, Cir NW 2 Cum — —	Cir-s, Cir-c SW 2 Cum — —	Cir-s, Cir-c SW 5 Cum — —
22	Cir-s 9 Cum, Str — ○	Cum 9 Str — ○	Cir-s NW 9 Cum — ○	Cir-s NW 8 Cum — —	7 Cum WNW —	7 Cum WNW — Cir-s, Cir WSW
23	Cir-s, Cir WSW 4 Cum — —	Cir-s, Cir WSW 4 Cum — ○	Cir-s 4 Cum — —	Cir-s, Cir 3 Cum — —	Cir-s, Cir WSW 6 Cum — —	4 Cum — —
24	Cir-s, Cir-c W 9 Cum, Cum-s — —	Cir-s WNW 9 Cum, Cum-s — ⊤	10 Nim WNW ☈ ●	Cum-s 9 Str WNW ○	Cir-s, Cir-c 9 Cum, Cum-s WSW ○	Cum-s 9 Str WNW — 6 Cum-s WNW —
25	8 Cum SW —	7 Cum SW —	6 Cum SW —	6 Cum SW —	6 Cum-s SW —	Cir-c SW
26	Cir-s, Cir-c SW 6 Cum — —	Cir-s, Cir-c SW 4 Cum — —	Cir-s, Cir-c SW 3 Cum-s — —	Cir-s, Cir-c SW 3 Cum-s — —	Cir-c SW 3 Cum-s — —	7 Cum-s NW — Cir-s, Cir-c W
27	Cir, Cir-s W 8 Cum-s — —	Cir, Cir-s W 8 Cum-s — —	Cir-s W 9 Cum-s, Str — —	Cir-s W 9 Str — —	Cir-s W 9 Str — —	9 Str — — Cir-s, Cir
28	Cir-s 1 Cum — —	Cir-s 1 Cum — —	Cir-s, Cir 1 Cum-s — —	Cir-s, Cir 2 Cum-s — —	Cir-s, Cir 3 Cum-s — —	4 Str — —
29	Cir, Cir-s WNW 7 Cum-s — —	Cir-s, Cir WNW 7 Cum-s — —	Cir-s, Cir WNW 8 Cum-s — ○	Cir-s, Cir-c WNW 7 Cum-s — —	Cir-s, Cir-c WNW 7 Cum-s — —	Cir-s, Cir-c WNW 8 Cum-s — —
30	10 Nim — ●	10 Nim — ●	10 Nim — ●	10 Str — —	10 Str — —	10 Nim — ●
31	Cir-s N 2 Str — —	Cir-s — 2 Str — —	Cir-s — 2 Str — —	Cir-s N 3 Str — —	Cir-s N 3 Str — —	Cir-c N 3 Str — —
Mean	6·4	6·3	6·3	6·2	6·2	6·5

Sums of Hydrometeors: 59 ●, 11 ☔, 1 ☇, 153 ∞.

August 1883—*continued*.

7	8	9	10	11	Midnight.	Mean Daily Amount of Cloud.
Cir-s, Cir SW 8 Cum-s — ∞ 10 Nim SW ∞ ● Cir-s 5 Cum-s SW ∞	Cir-s, Cir-c NW 9 Cum-s — ∞ Cum-s 10 Str SW ∞ 5 Cum-s SW ⊤	Cir-s NW 9 Cum-s, Str — ∞ 10 Nim SW ∞ ● 6 Cum-s SW ⊤	Cir-s 9 Str — ∞ 10 Str SW ∞ 8 Cum-s SW ⊼	8 Str — ∞ 10 Nim — ● 9 Nim ⊤ ●	Cum-s 8 Str — ∞ 10 Cum-s — — Cum 6 Cum-s —⊎ ⊼	5·1 8·8 7·1
1 Cum — — Cir-s SW 8 Cum-s, Str — — Cir-c SW 7 Cum, Cum-s — ∞ Cir 1 Cir-s — —	Cir-s 1 Cum — ∞ Cum-s 10 Str — — 6 Cum-s NW ∞ Cir, Cir-s 1 Str — —	Cir-s 1 Cum — — 10 Nim — ● 7 Cum-s NW ∞ Cir-s 2 Str — —	1 Cum — — 10 Nim — ● 8 Cum-s NW ⊎ ∞ 2 Str — ⊎	1 Str — ⊎ 10 Cum-s — — Cir-s 7 Cum-s —⊎ ⊼ 2 Str — ⊎	0 — — — 10 Cum-s — — Cum-s 9 Str N ⊼ 6 Str — ⊎	4·3 7·1 7·9 5·2
Cir-c NW 4 Cum, Cum-s — —	Cum NW 3 Cum-s, Str — —	Cir-c NW 4 Cum-s, Str — —	Cum-s 7 Str NW ⊎	7 Cum-s NW —	8 Cum-s NW —	7·5
9 Str NW — Cir-s, Cir NW 7 Cum-s — — Cir-s NW 8 Str — ∞ Cir, Cir-c SW 8 Cum-s — ∞ Cum 7 Cum-s — ∞	9 Cum-s NW — Cir-s, Cir NW 8 Cum-s — — Cir, Cir-s NW 7 Str — ∞ Cir-s SW 7 Str — ∞ Cir-s SW 4 Cum-s — ∞	8 Str NW — Cir NW 8 Cum-s, Str — — 7 Str — — 6 Str — ∞ Cir-c WSW 7 Cum-s — ∞	7 Str NW — 9 Str NW ⊎ Cum-s 6 Str — — 6 Str — ∞ 3 Str ∞ ⊎	3 Str — — 5 Str — ⊎ Cum-s 8 Str — ⊎ 1 Str — ∞ Cum-s 4 Str — ⊎	Cir-s 3 Str — — 5 Str — ⊎ Cum-s 8 Str — — 1 Str —∞ ⊎ Cum-s 8 Str — —	7·7 5·5 6·0 5·6 7·5
Cum-s 9 Str — — Cir-s 3 Cum — — 10 Nim — ● Cir-c WSW 9 Cum, Cum-s — — Cir-c SW 6 Cum-s — —	Cum-s 9 Str — — Cir-s 3 Str — — Cum-s 10 Nim — ● 9 Cum-s — — Cir-c SW 6 Str — —	Cum-s 9 Str — — 2 Str — — 10 Nim — ● Cum-s 2 Str — — Cir-c SW 6 Str — —	Cum-s 10 Str — — 3 Str — — 10 Nim — ● 1 Str — — Cir-c 6 Str —Ψ ⊎	Cum-s 9 Str — — 4 Str — ⊎ 10 Nim — ● 1 Str — ⊎ Cir-c 6 Str —Ψ ⊎	Cum-s 7 Str — — 3 Str — ⊎ 10 Str — — 1 Str — ⊎ Cir-c 4 Str —Ψ ⊎	8·8 5·2 9·2 7·4 3·2
10 Str — — Cum 9 Cum-s — — Cir-c SW 5 Str — — Cum 7 Str WNW — Cir, Cir-s WSW 3 Cum s — —	Cum-s 10 Str — — Cum-s 3 Str — — 6 Str — — Cum 8 Str WNW — Cir-s WSW 4 Str — —	10 Str — — Cum 2 Str — — 5 Str — — Cum 6 Str — — Cir-c W 8 Str — ⊎	9 Str — — Cum-s 1 Str — ⊎ 6 Str — — 3 Str —▷ ⊎ 4 Str — ⊎	Cum-s 6 Str — ⊎ 2 Cum — ⊎ Cum 7 Str NW Ψ 2 Str — ⊎ Cir-c 4 Str — ⊎	9 Str —Ψ ⊎ 2 Str — ⊎ 10 Str — — 2 Str — ⊎ Cir-c 3 Str — ⊎	8·7 6·5 3·0 7·7 3·5
10 Cum-s WNW — 8 Cum-s WNW — Cum-s 5 Str NW — Cir W 9 Str — — Cir WNW 3 Str — —	10 Cum-s WSW — Cum-s 6 Str WNW — Cum-s 8 Str NW — 8 Str — — Cir WNW 5 Str — —	10 Cum-s — ● Cum 7 Cum-s WNW — Cum-s 4 Str NW — 8 Str — — Cir-c 6 Str — —	10 Nim — ● 4 Str NW — 2 Str — ⊎ 7 Str — — 4 Str — ⊎	10 Str — ⊎ 2 Str — ⊎ 3 Str — ⊎ 1 Str —≺ ⊎ 3 Str — ⊎	10 Nim — ● 1 Str — ⊎ 2 Str — ⊎ 1 Str — — 2 Str — ⊎	8·4 7·0 3·7 7·1 2·2
Cir, Cir-s WNW 7 Cum-s, Str — — 9 Str — — Cir-c N 5 Cum-s, Str — —	Cir-s WNW 7 Cum-s, Str — — 9 Nim —≺ ● Cum-s 8 Str — —	5 Str — ⊎ 8 Str — — Cum-s 9 Str — —	5 Str — ⊎ 8 Str — — Cum-s 9 Str — —	8 Cum-s — ⊎ 1 Str — ⊎ Cum-s 9 Str — —	9 Cum-s — ⊎ 1 Str — ⊎ Cum-s 10 Str — —	5·6 8·6 3·7
6·8	6·8	6·5	6·1	5·3	5·5	6·3

September 1882.

A.M.

Days.	1	2	3	4	
1	o	o	c	o	
2	o	o	o	o	
3	o	o	o	o	
4	o	c		b	
5	c	o	o	o	
6	o	o	o	o	
7	c	c	c	c	
8	V. 2	V. 2	I. 2	c	
9	I. 2	b	I. 2	b	
10	I. 2	V. 1	I. 2	b	
11	I. 1	c	b	o	
12	o	o	o	o	
13	A	A	o	o	
14	I. 1	V. 1	V. 2	b	
15	V. 1	I. 1	I. 1	b	
16	o	o	c	o	
17	I. II. 2	c	b	b	
18	c	V. 1	o	o	
19	c	II. V. 1	V. 1	c	
20	II. V. 4	V. 2	II. V. 3	V. 2	
21	II. 3	II. 4	c	c	
22	I. II. 1	I. 2	I. 2	b	
23	c	c	V. 1	b	
24	c	c	c	c	
25	A	o	c	c	
26	V. 1	c	o	o	
27	o	o	o	o	
28	c	c	c	c	
29	o	o	o	V. 2	
30	o	o	o	o	
Sums - -	13	10	9	2	

October 1882.

A.M.

Days.	1	2	3	4	5	
1	I. 1	V. 2	I. 1	c	b	
2	I. 2	V. 2	II. 2	I. 1	b	
3	I. 3	b	b	b	b	
4	I. 2	I. 2	V. 2	V. 1	c	
5	o	V. 1	V. 1	I. 1	b	
6	o	o	o	o	o	
7	o	o	o	o	o	
8	I. 1	A	A	c	c	
9	I. 2	b	b	I. 2	b	
10	I. 1	I.* 3	I. V. 2	V. 2	b	
11	A	A	o	o	c	
12	o	o	o	o	o	
13	o	o	o	o	o	
14	o	o	o	o	o	
15	A	A	A	A	A	
16	o	o	A	A	A	
17	A	A	V. 1	o	o	
18	o	A	o	o	o	
19	o	o	o	o	o	
20	o	o	o	o	o	
21	c	o	o	o	o	
22	o	o	o	A	A	
23	o	A	o	o	o	
24	A	A	o	o	o	
25	o	o	o	o	o	
26	o	c	o	o	o	
27	o	o	o	o	o	
28	c	c	o	o	o	
29	o	o	o	o	o	
30	o	o	c	c	b	
31	o	o	o	o	c	
Sums - -	11	12	9	8	3	

* 2.15.

September 1882.

P.M.

7	8	9	10	11	Midnight.	Sums.
c	o	c	o	o	o	o
o	c	V. 2	I. 3	c	o	2
c	o	o	o	o	o	o
o	c	c	o	o	o	o
o	c	c	o	o	o	o
o	c	c	I. 2	I. 2	c	2
o	o	o	c	I. 3	A	2
c	c	I. 1	I. 2	I. 1	I. 1	7
b	b	V. 1	I. 2	I. II. 2	I. 1	6
c	I. 1	I. 2	V. 3	V. 2	I. 2	8
o	o	o	o	o	o	1
o	o	A	II. 1	A	A	4
o	o	A	A	I. 3	V. 1	6
b	b	II. 2	I. II. 2	I. V. 1	I. 2	7
o	c	b	b	c	o	3
o	o	A	A	A	V. 1	4
o	o	c	c	c	b	1
c	b	V. 1	I. 1	I. 1	c	4
b	I. 1	I. 1	I. II. 2	I. II. III. 3	I. 1	7
o	c	I. 2	V. 1	I. V. 3	V. 1	8
c	b	b	b	b	I. II.* 3	3
b	I. 1	V. 1	I. 1	VII. 2	V. 1	8
c	c	c	c	c	V. 1	2
c	I. 2	o	o	A	o	2
c	c	I. 1	c	o	V. 1	3
V. 1	A	c	A	o	c	4
o	o	o	o	o	I. 2	1
o	o	o	o	o	o	o
o	o	o	o	o	o	1
o	o	c	II. 1	II. 1	V. 1	3
1	5	13	15	15	16	99

* 12.15.

October 1882.

P.M.

6	7	8	9	10	11	Midnight.	Sums.
b	b	b	b	I. 2	V. 2	I. III. 2	6
b	I. 2	I. 2	III. V. 3	I. 1	I. 1	I. 2	10
b	I.* 2	I. II. 2	I. 2	I. 3	I. 3	II. V. 3	7
c	c	I. 1	I. 2	V. 2	A	o	8
o	o	o	A	A	I. II. 3	o	6
o	o	o	o	o	o	o	o
c	c	c	A	c	o	c	1
b	I. 1	I. 2	I. 1	I. 1	II. V. 2	I. 1	9
o	o	V. 1	A	V. 1	I. 1	IV. 4	7
c	II. 1	II. 2	I. 1	A	A*	I. V. 2	10
o	o	o	o	o	o	o	2
o	o	o	o	o	o	o	o
o	o	o	o	A	A	A	3
o	o	o	o	A	A	A	3
o	o	A	A	c	A	o	8
o	o	A	A	A	A	o	7
c	I. II. 3	A	A	o	o	o	6
o	o	o	o	A	o	A*	3
o	o	o	o	o	o	o	o
o	o	o	o	o	o	o	o
o	o	o	o	o	o	o	o
o	o	o	o	o	o	o	2
o	o	o	o	o	o	o	1
o	o	o	o	A	o	o	3
o	o	A	o	o	o	o	1
o	o	o	o	c	c	c	0
o	o	o	o	A	o	o	1
o	o	o	o	o	o	o	0
o	o	o	c	o	o	o	0
o	o	b	b	o	o	o	0
b	b	b	b	o	o	o	3
I. II. 2	I. II. 2	I. 1	b	o	o	o	3
1	6	11	11	14	12	9	107

* 7.15. * 11 15 * 12 15.

November 1882.

A.M.

Days.	1	2	3	4	5	6	7
1	o	I. 2	V. 2	b	b	b	b
2	o	o	o	o	o	o	o
3	o	o	o	o	I. 2	V. 3	b
4	o	o	o	o	o	o	o
5	A	A	o	o	o	o	o
6	II. 1	b	b	V. 2	I. 2	c	o
7	o	I. 3	V. 3	c	I. II. 2	c	b
8	I. II. 3	I. 1	b	I. 1	I. V. 2	V. 1	b
9	o	o	II. 1	V. 1	I. V. 3	o	c
10	o	o	o	o	o	A	o
11	o	o	o	o	o	c	c
12	I. V. 1	V. 3	V. 3	I. II. 3	I. V. 3	II. V. 3	b
13	A	A	V. 1	I. V. 2	II. V. 3	I. II. 3	c
14	o	o	o	o	o	o	o
15	A	A	o	o	o	o	o
16	o	A	o	V. 2	II. 2	c	c
17	I. 1	V. 1	II. 4	V. 3	V. 1	V. 1	o
18	I. 2	A	A	A	II. 2	V. 3	o
19	o	o	o	o	o	o	o
20	c	A	V. 1	c	c	IV. 1	o
21	c	c	c	c	V. 3	c	b
22	c	b	c	V. 1	b	b	o
23	o	o	o	o	o	o	o
24	o	o	o	o	o	o	o
25	o	o	o	o	o	o	o
26	o	o	o	o	o	o	o
27	c	c	V. 2		c	o	o
28	o	o	A	o	o	o	o
29	o	o	b	b	o	o	o
30	V. 2	I. 2	I. II. 3	V. 1	b	b	II. 2
Sums - -	9	12	11	10	11	8	1

December 1882.

A.M.

Days.	1	2	3	4	5	6	7
1	o	o	o	o	o	o	o
2	b	o	o	c	I. 1	o	o
3	c	o	I. 1	V. 1	c	c	o
4	I. V. 1	I. 2	I. 2	I. 2	II. 1	V. 1	c
5	V. 1	b	b	I. II. 2	I. 1	b	b
6	I. 3	V. 1	V. 1	II. 2	b	I. 2	I. 2
7	I. 1	II. 1	I. V. 2	V. 2	b	b	b
8	o	o	o	o	o	o	o
9	c	o	o	o	c	c	V. 1
10	II. 2	V. 2	I. 1	I. V. 1	b	b	b
11	I. 3	I. V. 1	A	A	V. 2	V. 1	o
12	c	V. 1	I. 3	V. 2	A	c	c
13	I. II. 1	c	c	c	b	V. 1	c
14	I. 1	I. 2	b	I. 2	I. 2	V. 2	V. 1
15	b	I. 1	c	c	II. 1	o	c
16	V. 1	I. V. 3	I. II. V. 2	I. V. 1	o	I. II. 1	II. 1
17	c	o	c	b	b	o	o
18	A	c	c	b	c	c	c
19	II. V. 2	I. V. 3	I. V. 2	I. II. 1	V. 1	I. 1	c
20	I. 2	V. 1	V. 1	b	V. 1	V. 1	I. II. 2
21	c	c	c	c	c	o	c
22	II. 1	I. II. 1	b	b	b	c	I. 1
23	o	o	o	o	o	o	o
24	I. 3	II. 2	c	c	c	c	b
25	o	o	o	o	o	c	
26	A	c	c	c	o	o	
27	I. V. 2	I. 3	I. II. 2	I. 2	c	b	b
28	o	o	o	o	o	c	
29	V. 2	II. V. 2	I. 3	II. 2	V. 2	c	V. 1
30	c	c	c	o	o	o	c
31	II. V. 2	I. 2	b	I. V. 1	I. 2	I. 1	b
Sums - -	18	16	12	14	11	9	7

November 1882.

P.M.

5	6	7	8	9	10	11	Midnight.	Sums.
o	o	o	o	c	o	o	o	2
o	o	o	o	o	o	o	o	o
o	o	o	o	o	o	o	o	2
o	o	o	c	I. 1	I. 2	V. 1	o	3
o	o	I. 2	V. 2	V. 1	b	b	I. 1	6
o	o	c	o	o	o	o	o	3
c	c	I. 1	I. 1	c	V. 3	I. V. 3	I. 3	8
o	o	o	A	o	o	o	o	6
A	o	o	o	o	o	o	o	4
o	o	o	o	o	o	o	o	1
II. 2	V. 2	II. V. 2	I. II. 3	I. 3	I. II. 1	I. II. III.* 4	V. 1	8
I. 2	I. II. 3	II. 1	A	A	A	A	II. V. 3	14
b	I. 2	I. II. 2	I. 3	I. V. 2	V. 2	A	o	12
o	o	I. 2	o	o	A	A	A	4
o	o	I. 1	c	c	o	o	o	3
I. II. 2	V. 1	II. 1	II. V. 2	I. II. 2	b	V. 1	I. II. V. 2	10
o	o	I. V. 3	II. V. 1	V. II. 1	II. V. 2	V. 1	II. V. 3	12
o	o	o	o	o	o	o	o	6
o	c	c	o	o	II. 2	V. 1	c	2
I. 2	I. II. 2	I. 2	I. 2	I. 1	I. 1	c	c	9
I. 1	b	b	b	b	I. 2	I. II. 2	I. 1	5
o	o	o	o	o	o	o	o	1
o	o	o	o	o	o	o	o	o
o	o	o	o	o	o	o	o	o
o	o	o	o	o	o	o	o	o
o	o	o	A	o	o	c	V. 2	2
b	I. 1	I. 2	b	c	c	V. 2	II. 3	5
o	o	o	o	o	o	o	o	1
c	c	c	c	V. 1	I. V. 2	I. 1	V. 1	4
I. 1	c	I. 3	I. 1	I. 2	I. 2	I. 1	V. 1	12
7	6	12	11	10	12	13	12	145

* 10.45 P.M.

December 1882.

P.M.

4	5	6	7	8	9	10	11	Midnight.	Sums.
o	o	o	II. 1	c	c	I. 1	c	c	2
o	o	o	o	o	o	o	o	o	1
c	II. 1	I. 2	I. 3	I. II. 2	I. 2	I. 2	I. 2	I. V. 3	10
o	c	c	I. 1	b	I. 1	V. 1	I. 2	I. 2	11
b	b	b	b	b	b	I. 1	II. 3	V. 2	6
b	I. 2	I. II. 2	I. 2	I. II. 4	I. II. 4	I. 1	V. 2	I. 2	14
c	c	o	o	o	o	o	o	o	4
o	c	b	V. 1	b	I. 1	I. V. 2	A	c	4
c	II. 1	II. 3	I. 1	I. 1	I. V. 1	I. 2	I. II. 2	I. II. 2	9
c	c	c	II. 2	I. 2	V. 1	I. 2	II. 2	I. 1	10
o	c	c	c	c	I. 1	I. 1	V. 1	c	9
o	c	c	b	b	I. 1	II. 1	V. 1	I. V. 1	8
b	I. 2	I. II. 2	II. 1	I. 1	I. 1	I. 1	I. 1	I. II. 2	10
o	o	c	b	c	b	V. 1	I. V. 1	b	8
o	o	o	o	o	o	o	o	A	3
o	o	o	o	o	o	o	c	c	6
c	o	o	o	o	V. 1	c	c	I. V. 2	2
II. 1	b	II. V. 2	II. 3	V. 2	I. V. 2	VIII. 4	I. V. 3	I. 2	9
c	c	c	I. 1	c	I. 3	I. 1	II. V. 1	II. IV. 4	11
c	II.* 1	I.* 2	I. II. 3	o	I. V. 2	V. 1	I. 2	V. 1	13
c	c	c	c	I. 2	I.* 2	V. 2	I. II. III. 2	I. V. 2	5
o	o	o	o	o	o	o	o	o	3
c	c	c	b	V. 1	c	o	o	o	1
o	o	o	o	o	o	o	o	o	2
o	I. 1	c	o	o	o	o	A	o	2
c	I. III. 2	I. III. 2	b	II. V. 1	I. V. 2	I. 1	II. V. 2	I. 2	8
c	V. 1	o	o	o	o	o	o	o	5
b	I. 1	I. 2	I. II. 2	I. III. 2	I. 1	I. 2	I. 1	I. 2	8
c	I. 1	I. II. 2	I. III. 2	I. 2	I. 2	I. V. 1	I. 1	o	13
c	V. 2	V. 1	V. 1	I. 2	I. 3	I. 2	I. V. 2	I. 2	8
b	I.‡ 2	I. 2	I. 1	I. V. 2	I. 2	I. 1	I. 1	I. II. 2	13
1	12	11	15	13	19	21	21	18	218

* 5.15.
‡ 4 45.

* 6.15.

* 9.15.

January 1883.

A.M.

Days.	1	2	3	4	5	6	7
1	I. 1	I. V. 3	I. V. 2	V. 1	V. 1	II. V. 2	b
2	I. 1	I. 1	V. 1	V. 1	V. 1	c	V. 1
3	I. III. 2	II. 2	b	b	I. V. 1	II. V. 1	b
4	I. 2	I. 2	I. 2	I. V. 2	V. 2	b	b
5	I. 2	I. 2	I. III. 1	II. 2	b	b	b
6	I. II. 3	II. 1	I. V. 2	I. V. 2	I. V. 1	I. V. 2	II. 2
7	I. 2	I. II. 3	II. V. 3	I. V. 2	I. 2	I. 1	II. 1
8	I. 2	II. 1	A	A	A	V. 1	V. 1
9	A	A	o	II. 1	I. 1	c	c
10	A	A	c	c	c	o	c
11	c	c	c	o	o	o	o
12	I. II. 1	V. 1	V. 1	V. 1	b	b	b
13	c	I. 1	A	c	c	I. 1	II. 2
14	I. 3	I. 2	I. II. 1	I. II. 2	I. II. 3	I. II. 2	b
15	o	o	A	o	o	o	o
16	I. 1	II. 1	I. 1	I. 1	I. V. 1	V. 1	b
17	V. 1	V. 1	I. 1	I. II. V. 1	I. 2	I. II. V. 2	V. 1
18	I. 3	I. 1	I. 1	I. II. 1	I. V. 1	I. 1	b
19	c	o	o	o	o	o	o
20	V. 2	I. 1	II. 2	V. 2	V. 2	I. II. 2	I. II. V. 3
21	I. II. 2	V. 2	I. 1	V. 2	II. V. 1	V. 1	b
22	b	b	b	V. 1	V. 1	b	b
23	VIII. 4	I. II. 2	II. 2	b	b	b	b
24	I. 1	b	b	b	b	b	b
25	I. 3	II. 1	II. 2	V. 2	II. 1	V. 1	II. 2
26	o	o	o	o	o	o	o
27	I. 2	A	o	o	o	o	o
28	o	o	o	o	o	o	o
29	I. 2	c	c	c	I. II. 2	I. 3	b
30	II. V. 2	I. 2	V. 2	V. 1	b	b	b
31	I. III. V. 3	I. 3	I. 2	V. 1	b	o	c
Sums - -	24	23	20	19	17	14	8

February 1883.

A.M.

Days.	1	2	3	4	5	6
1	I. 1	I. 1	I. II. 3	I. 2	I. V. 2	I. II. 1
2	II. V. 1	I. V. 2	V. 2	A	I. II. 2	I. II. V. 2
3	A	o	o	V. 2	I. II. V. 2	I. V. 2
4	V. 2	c	I. II. 1	I. II. 1	c	II. 1
5	I. II. 2	I. 2	I. V. 2	c	o	o
6	I. 2	I. 1	I. 1	I. II. 1	V. 1	V. 1
7	I. 2	A	o	V. 1	o	V. 1
8	o	o	o	o	c	I. 1
9	A	I. 2	I. 1	I. 1	I. 2	c
10	I. 2	V. 3	I. V. 1	I. 2	I. II. III. V. 2	I. II. 2
11	I. 2	I. V. 2	V. 1	II. 1	c	c
12	I. 1	I. 1	b	II. V. 2	I. 1	b
13	II. 1	b	b	I. 1	I. II. V. 2	II. 1
14	I. 2	I. II. 2	I. II. 1	I. 2	I. II. V. 2	II. V. 2
15	II. 2	b	c	I. 1	b	c
16	c	V. 1	I. 2	I. III. 2	I. II. 1	b
17	V. 2	I. 2	b	c	I. 1	c
18	o	o	c	o	o	o
19	b	b	c	c	I. 1	o
20	I. 2	I. 2	II. 1	II. 3	o	II. 1
21	I. 2	V. 2	c	c	c	c
22	I. 1	I. 2	c	I. 1	I. 2	o
23	c	A	o	o	o	o
24	c	I. 1	c	c	c	I. 2
25	o	o	o	o	o	o
26	o	o	o	o	o	o
27	o	o	o	o	o	o
28	o	o	o	o	o	o
Sums - -	18	17	11	16	13	12

January 1883

P.M.

5	6	7	8	9	10	11	Midnight.	Sums.
I. 1	I. 1	I. 2	I. 1	I. 2	I. 2	I. 1	I. 2	14
b	b	b	b	b	b	b	I. 2	7
b	b	b	b	b	b	b	I. 1	5
b	II. V. 1	I. 1	I. 3	I. 3	I. V. 1	I. V. 3	II. V. 2	12
II. V. 1	I. V. 1	I. 2	I. 2	I. 1	I. 2	I. II. 2	I. 2	12
b	b	b	I. II. 1	I. III. 2	I. V. 3	I. V. 3	I. V. 3	12
II. 2	I. II. 1	II. 2	I. 1	I. 1	I. V. 2	A	A	15
o	c	c	c	o	o	o	o	7
b	b	c	c	I. V. 2	I. 1	A	A	8
c	b	c	c	o	o	o	o	2
o	o	o	o	o	A	I. 1	I. V. 1	3
c	o	c	c	c	A	c	c	5
c	c	c	c	b	b	c	I. 3	5
c	b	c	c	c	o	o	o	6
b	b	b	b	b	II. V. 1	I. 1	II. V. 3	4
c	c	o	o	c	I. 1	c	V. 1	8
b	b	b	b	I. 1	I. 2	I. 2	I. II. 2	11
c	o	o	o	o	o	o	o	6
c	b	b	b	b	b	I. 1	II. 1	2
c	c	I. 3	I. 2	I. 2	I. 2	I. 2	I. II. III. 2	13
b	b	b	b	b	b	b	b	6
c	c	o	c	c	c	b	II. 1	3
b	b	b	b	b	b	b	b	3
b	I. 2	b	o	o	o	c	I. II. III. 1	3
o	o	c	A	o	o	o	o	8
o	c	I. 2	I. 3	I. 2	I. 1	I. V. 1	I. 1	6
o	o	o	A	o	o	o	o	3
o	o	o	o	V. 1	V. 2	I. 2	I. 2	4
c	c	V. 1	c	o	o	I. II. 2	V. 1	6
b	I. 2	I. II. 2	I. III. 3	I. 2	I. V. 2	I. V. 3	I. V. 3	11
c	I. II. 2	V. 1	b	I. 1	I. 2	I. 1	V. 1	10
3	7	9	10	12	16	16	22	220

February 1883.

P.M.

6	7	8	9	10	11	Midnight.	Sums.
I. II. 2	V. 2	V. 1	II. 2	II. V. 2	I. 1	I. 2	13
c	o	c	I. 1	o	A	o	8
c	I. 2	I. 2	I. 1	I. 2	I. 1	c	9
A	o	o	o	o	o	I. V. 1	6
c	V. 1	I. V. 2	I. 2	I. 2	I. 3	I. III. 3	9
c	o	o	o	o	o	c	6
b	I. V. 1	I. 1	I. 1	c	o	o	7
o	I. II. 2	c	o	c	o	o	2
I. 1	I. II. 2	I. III. 2	I. 2	V. 3	I. 2	I. 2	12
o	o	o	o	o	o	o	6
c	b	c	I. 1	I. 1	I. 2	I. 1	8
o	c	c	c	b	b	b	4
b	b	b	b	b	I. 1	I. III. 3	6
c	I. II. 1	I. II. III. 1	b	b	c	III. V. 2	9
b	II. 2	I. II. 3	I. 1	c	V. 2	I. 2	7
c	c	o	o	c	I. 2	I. 2	6
c	c	c	b	c	II. 1	o	4
c	c	c	II. 4	c	c	I. 2	2
c	c	c	c	c	I. 1	I. III. 2	3
c	c	b	b	b	b	I. 2	6
o	o	o	o	I. 2	I. 1	I. II. 3	5
o	o	o	o	o	c	A	5
b	I. 2	I. 2	I. 2	I. III. 2	I. 2	V. 2	7
o	I. V. 1	I. V. 2	I. 2	o	o	o	5
o	o	o	o	o	o	o	0
o	A	A	A	I. 1	I. 1	I. 1	6
o	o	o	o	A	A	o	2
o	I. II. V. 3	I. II. V. 1	I. III. 2	I. II. 3	I. 2	I. 3	6
3	12	11	13	10	16	17	169

March 1883.

A.M.

Days.	1	2	3	4	5	
1	I. V. 1	V. 1	V. 2	I. III. 2	V. 1	
2	V. 2	V. 2	I. III. 2	II. V. 3	I. 2	
3	V. 2	I. V. 2	V. 1	II. V. 1	II. V. 1	
4	I. II. 3	I. II. 1	I. 1	I. II. 1	I. 1	
5	I. II. V. 2	V. 3	II. 2	II. V. 2	I. 1	
6	I. 3	I. 2	I. 1	I. 2	I. 1	
7	I. II. 2	I. V. 2	I. II. 2	I. V. 2	A	
8	V. 2	A	o	o	o	
9	I. 2	I. 2	I. II. 2	I. V. 2	b	
10	V. 1	V. 1	V. 1	o	o	
11	II. V. 3	I. II. 3	I. 2	I. 2	c	
12	c	o	o	o.	o	
13	o	o	o	II. V. 1	II. 3	
14	I. II. 2	I. V. 1	I. 2	V. 2	b	
15	V. 2	I. 1	I. 1	II. 1	c	
16	o	o	o	o	o	
17	V. 1	I. II. 2	I. II. 1	b	b	
18	b	b	II. 1	I. II. 1	b	
19	I. 2	II. V. 2	c	V. 1	o	
20	o	o	c	o	o	
21	c	I. 1	I. 2	I. II. 2	b	
22	V. 2	I. 1	II. V. 2	II. V. 2	c	
23	I. 2	V. 1	I. 2	b	b	
24	I. 1	b	b	b	b	
25	I. 2	V. 2	V. 1	b	b	
26	I. II. V. 3	I. 1	V. 1	I. 2	b	
27	I. V. 4	V. 1	V. 2	II. V. 2	b	
28	II. V. 2	I. 1	II. V. 1	I. 1	b	
29	I. V. 2	II. V. 2	II. 2	c	c	
30	I. 2	V. 2	I. II. 1	b	b	
31	V. 2	I. III. 2	V. 2	b	b	
Sums - -	25	25	24	19	8	

April 1883.

A.M.

Days.	1	2	3	
1	A	A	o	
2	IV. V. 4	II. V. 2	II. V. 2	
3	A	o	o	
4	I. V. 2	I. V. 1	I. V. 1	
5	I. 3	V. 1	I. 1	
6	I. 2	V. 1	o	
7	I. 2	V. 1	c	
8	V. 2	V. 1	A	
9	V. 2	c	o	
10	b	b	c	
11	V. 2	I. 2	I. V. 2	
12	II. V. 2	I. 1	c	
13	o	o	o	
14	c	c	c	
15	o	o	o	
16	b	II. 2	I. 2	
17	I. 1	c	c	
18	I. II. 3	II. III. V. 2	b	
19	II. 2	I. II. 2	b	
20	I. 2	II. 1	b	
21	o	o	o	
22	o	o	o	
23	o	o	o	
24	o	o	o	
25	V. 2	V. 2	b	
26	II. V. 1	b	b	
27	A	o	o	
28	c	o	o	
29	o	c	o	
30	o	o	o	
Sums - -	18	14	6	

March 1883.

P.M.

7	8	9	10	11	Midnight.	Sums.
I. 2	I. 2	I. II. 1	I. II. 2	I. II. 3	II. V. 2	11
I. 1	I. 1	I. 1	I. 2	V. 2	V. 2	11
I. 1	I. 2	I. 3	V. 2	I. V. 1	I. 2	11
I. V. 2	I. V. 2	I. II. 2	I. II. 2	II. III. 3	I. II. 2	11
b	I. 1	I. 2	I. 2	I. 2	I. 2	10
c	o	A	A	I. V. 1	II. V. 2	9
c	I. III. 2	I. II. 2	I. V. 2	I. 2	I. II. V. 3	10
I. II. III. 2	I. II. III. 2	I. II. III. V. 3	I. V. 2	I. 2	I. 2	8
I. 2	I. II. 2	I. 2	I. 2	I. V. 1	I. V. 2	10
o	c	c	II. 1	V. 1	A	6
o	c	b	b	II. 1	I. 1	6
o	o	I. 3	IV. 3	o	o	2
o	o	b	I. 2	I. II. 2	I. II. III. V. 2	5
b	I. 1	I. 2	I. II. 2	I. 3	I. 2	9
o	o	o	o	o	o	4
c	I. V. 2	b	c	c	II. V. 2	2
b	b	I. 1	V. 2	o	b	5
b	b	b	I. 2	I. III. 2	I. 1	5
o	o	o	o	o	o	3
c	o	o	o	o	o	0
b	V. 2	V. 2	V. 2	I. II. 3	I. V. 3	8
b	I. 2	I. 2	I. V. 3	V. 1	V. 1	9
b	I. 1	I. 2	V. 1	II. 3	I. V. 2	8
b	I. 2	I. 2	I. 3	V. 2	I. 2	6
b	I. 1	I. V. 2	I. 1	I. 2	II. V. 1	8
c	II. V. 3	I. II. 2	I. III. V. 2	II.* 2	I. II. 3	9
b	I. 2	I. 3	I. 3	I. V. 2	I. II. V. 3	9
b	I. III. 2	II. V. 2	V. 2	I. II. III. V. 2	II. V. 1	9
b	I. 2	I. II. 2	II. V. 1	I. 2	I. 2	8
b	I. 2	I. 1	b	I. II. 1	II. V. 1	7
c	c	I. V. 2	I. 1	I. II. V. 2	II. V. 2	7
6	20	23	25	25	26	226

* 11.20 PM.

April 1883.

P.M.

	8	9	10	11	Midnight.	Sums.
	c	I. 2	I. 4	I. V. 1	I. 2	6
	o	o	o	A	A	5
	I. III. 2	I. 2	I. V. 2	I. 2	I. II. 3	6
	b	I. 1	I. II. 2	I. 2	I. 2	7
	o	A	A	V. 3	V. 1	7
	o	o	b	I. II. 1	I. II. 2	4
	o	c	I. II. 1	I. 1	I. V. 2	5
	o	o	o	I. V. 2	I. 1	5
	c	o	o	V. 1	c	2
	b	b	I. 1	I. V. 2	I. V. 2	3
	c	c	I. 2	I. II. III. 2	I. II. 2	6
	c	c	c	o	A	3
	c	I. 1	c	I. 1	I. 1	3
	c	c	c	o	o	0
	c	b	II. 1	b	III. V. 1	2
	b	b	II. 2	I. 1	I. 1	5
	b	b	b	II. 2	b	2
	b	b	I. III. 2	I. II. IV. 3	I. II. 1	5
	b	I. 2	V. 1	V. 2	I. 2	6
	o	o	o	o	o	2
	o	o	o	o	o	0
	o	o	o	o	o	0
	c	c	c	c	c	0
	o	o	A	V. 1	I. II. 2	3
	b	I. II. 2	b	I. II. V. 2	I. 2	5
	c	c	I. 2	I. II. V. 2	I. III. 2	4
	o	o	o	o	o	1
	o	c	c	A	A	2
	c	c	c	I. 1	I. 1	2
	c	c	I. II. 2	I. 1	c	2
	1	7	14	22	21	103

May 1883.

A.M.

Days.	1	2	
1	I. 2	c	
2	o	o	
3	o	II. 3	
4	b	I. 2	
5	c	c	
6	o	o	
7	b	b	
8	c	c	
9	c	c	
10	o	o	
11	b	b	
12	b	b	
13	o	c	
14	b	b	
15	c	c	
16	I. 1	b	
17	c	c	
18	b	o	
19	o	o	
20	c	c	
21	c	c	
22	o	o	
23	c	c	
24	c	c	
25	o	o	
26	c	c	
27	c	c	
28	c	c	
29	c	c	
30	o	c	
31	o	o	
Sums - -	2	2	

July 1883.

A.M.

Days.	1	
1	o	
2	c	
3	o	
4	c	
5	o	
6	b	
7	c	
8	c	
9	o	
10	c	
11	o	
12	o	
13	c	
14	o	
15	c	
16	b	
17	c	
18	b	
19	c	
20	o	
21	o	
22	c	
23	o	
24	c	
25	o	
26	c	
27	o	
28	c	
29	I. 2	
30	I. 1	
31	c	
Sums - -	2	

May 1883.

P.M.

	11	Midnight.	Sums.
	I. 1	c	2
	o	o	o
	b	b	1
	I. 1	I. 1	3
	o	o	0
	II. 1	b	1
	o	o	o
	b	I. II. 3	1
	o	o	o
	b	I. V. 2	1
	I. 2	I. II. 2	2
	II. 2	II. 2	2
	b	b	o
	c	I. 2	1
	b	b	o
	c	b	1
	b	c	o
	c	c	o
	c	c	o
	c	V. 3	1
	o	o	o
	c	c	o
	c	c	o
	o	o	o
	c	c	o
	c	c	o
	c	o	o
	c	c	o
	o	o	o
	o	o	o
	b	b	o
	5	7	16

July 1883.

P.M.

	11	Midnight.	Sums.
	c	c	o
	o	o	o
	c	c	o
	b	c	o
	b	b	o
	o	c	o
	o	c	o
	o	o	o
	c	c	o
	o	o	o
	o	o	o
	c	c	o
	o	II.* 4	1
	c	II. 1	1
	b	b	o
	c	c	o
	b	b	o
	II. 2	c	1
	o	o	o
	c	o	o
	c	c	o
	A	o	1
	II. 4	o	1
	o	o	0
	o	I. 2	1
	o	o	o
	o	o	o
	V. 2	V. 2	2
	II. 3	II. 2	3
	c	I. 2	2
	c	c	o
	5	6	13

* 12.11 A.M.

August 1883.

A.M.

Days.	1	2	3	
1	o	o	c	
2	o	o	o	
3	o	o	o	
4	c	c	o	
5	II. 3	II. 2	c	
6	o	o	o	
7	o	o		
8	o	o	o	
9	o	o	o	
10	c	c	b	
11	o	o	o	
12	I. 1	o	o	
13	II. 1	II. 1	o	
14	c	V. 1	c	
15	o	o	o	
16	II. 1	c	c	
17	o		o	
18	II. IV. V. 3	I. 2	b	
19	c	c	c	
20	o	o	o	
21	I. 2	b	b	
22	o	o	o	
23	I. 1	b	c	
24	V. 2	V. 1	c	
25	A	o	o	
26	I. 2	I. 2	II. 1	
27	I. II. 3	c	c	
28	I. II. V. 2	II. 2	b	
29	I. III. V. 2	c	c	
30	o	o	o	
31	I. 2	II. 1	o	
Sums - -	14	8	1	

The preceding tables are compiled from the journal of hourly auroral observations.

The form of the aurora is expressed by Roman figures, according to Weyprecht's scale, viz:—

I. Arch.
II. Streamers.
III. Striæ.
IV. Corona.
V. Patches, or undefined light.
VI. Dark segment.
VII. Polar light.
VIII. Sheaves.

The brilliancy is shown by Arabic numerals on the scale 1—4, 1 being very faint, and 4 very bright, aurora.

The letter A denotes that aurora was observed, but that it was more or less concealed by clouds.

At hours when no aurora was recorded the state of the sky is shown by the letters b, c, o.

The dotted lines mark the beginning and end of twilight.

August 1883.

P.M.

	9	10	11	Midnight.	Sums.
	o	o	o	o	o
	o	o	o	o	o
	c	o	o	I. 1	1
	b	b	V. 2	b	1
	o	o	o	o	2
	c	I. 3	II. V. 2	o	2
	c	I. II. III. V. 3	I. 2	V. 2	3
	c	c	V. 3	o	1
	o	c	c	c	o
	o	II. V. 3	I. IV. 2	II. 1	3
	c	c	A	o	1
	c	c	b	V. 1	2
	c	I. 1	I. 1	o	4
	o	o	o	c	1
	c	c	II. 1	II. 2	2
	o	o	o	o	1
	c	b	I. 2	I. 2	2
	c	I. 2	V. 2	II. 1	5
	o	o	II. 3	A	2
	c	I. 2	I. 2	I. 2	3
	c	c	c	o	1
	c	I. II. III. 3	I. II. V. 2	V. 2	3
	V. 2	I. III. 2	I. 2	I. 3	5
	o	o	A	o	3
	c	c	I. 2	II. IV. 3	3
	c	I. 2	V. 3	I. 4	6
	o	c	I. 2	I. V. 2	3
	c	II. 1	I. II. 3	I. III. 1	5
	I. 1	I. III. V. 2	A	o	4
	o	o	V. 1	I. 1	2
	A	A	A	o	5
	3	12	22	16	76

Corrected Readings of a MAXIMUM BLACK-BULB THERMOMETER *in vacuo* exposed to Sunshine at FORT RAE, 1882–3.

Days.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	August.
	°	°	°	°	°	°	°	°	°	°	°	°
1	—	34·1	19·1	−20·6	−17·3	− 5·4	15·1	34·1	36·7	45·1	52·7	50·5
2	—	35·8	3·2	−21·6	−18·4	− 4·1	12·3	35·9	38·9	49·3	54·1	52·2
3	—	36·5	− 2·6	−19·1	−24·7	5·9	17·4	36·3	38·3	53·3	53·8	53·6
4	—	37·3	0·3	−11·3	−20·0	6·1	13·9	31·9	29·2	54·7	48·2	55·1
5	22·7	28·9	− 9·5	−11·4	−17·2	11·7	14·7	31·8	39·9	43·8	51·7	54·1
6	41·3	12·8	− 4·5	− 6·4	−16·1	−12·2	21·1	35·3	33·6	44·3	56·4	51·1
7	37·7	24·7	0·1	− 7·0	−13·3	9·3	22·5	39·1	42·9	43·7	54·8	48·1
8	43·7	34·8	6·7	−13·9	−24·2	−11·4	24·1	33·9	42·6	27·9	58·5	51·8
9	42·3	36·6	0·6	−11·3	− 8·2	22·6	23·5	41·1	43·0	50·9	56·8	52·3
10	42·4	33·7	23·1	−20·6	− 6·9	− 9·1	27·5	37·8	44·9	47·3	48·6	50·8
11	27·2	9·6	17·4	−26·4	−19·2	5·9	24·6	36·6	38·8	44·0	34·3	46·8
12	30·4	8·4	13·8	−27·3	− 5·3	3·8	29·2	44·1	40·7	41·8	49·2	48·0
13	28·9	10·4	13·9	−30·0	− 6·4	3·9	28·9	29·4	40·3	48·4	57·2	47·8
14	46·8	8·6	− 2·0	−28·2	− 7·7	4·9	21·4	38·7	40·6	47·1	56·9	29·3
15	40·0	34·2	4·3	−26·1	−24·7	9·7	27·9	41·2	40·1	49·5	56·2	49·8
16	47·3	31·9	17·4	−23·3	−11·7	13·1	24·3	36·1	43·6	47·2	50·3	31·4
17	36·2	24·3	− 0·2	− 7·3	−14·9	5·4	16·8	36·1	46·2	48·0	48·9	51·1
18	41·6	4·9	2·9	−10·8	−12·3	13·4	24·3	34·7	42·7	45·3	50·0	47·4
19	47·7	20·9	− 0·8	−24·9	− 3·7	16·4	25·9	36·7	49·3	43·9	55·9	40·4
20	34·8	5·8	− 2·8	−10·2	− 7·1	21·2	30·4	36·5	53·5	35·7	52·9	46·8
21	45·6	5·2	8·5	−11·4	−20·5	15·6	25·6	23·4	52·3	49·3	56·4	45·4
22	38·4	8·7	− 6·4	−10·9	−12·9	16·6	26·6	41·9	42·3	54·5	53·9	51·0
23	38·6	4·0	− 4·6	− 0·3	−12·2	13·8	21·8	37·1	42·6	60·2	56·8	45·6
24	36·2	7·7	− 6·0	−19·4	− 7·2	5·4	20·9	37·0	42·6	53·1	51·2	43·9
25	45·3	5·4	− 5·9	− 3·6	0·0	− 2·6	25·1	36·1	43·4	50·6	31·1	49·7
26	38·2	26·7	− 6·7	6·7	− 6·0	− 0·1	27·4	37·8	43·2	57·8	53·2	44·9
27	20·7	5·9	− 4·6	10·3	−13·3	9·5	28·2	40·5	49·2	43·3	56·4	45·6
28	39·7	8·3	−12·2	− 4·9	−12·4	14·2	29·6	39·6	42·0	44·9	47·5	46·7
29	38·0	6·0	0·2	−10·4	− 5·9	—	30·9	44·4	48·6	32·3	50·5	48·7
30	17·4	1·0	− 8·5	−11·7	− 0·8	—	29·0	33·3	26·9	48·8	50·4	28·9
31	—	5·4	—	−13·7	− 2·0	—	29·7	—	41·8	—	50·9	43·3

Solar Radiation, or the excess of a MAXIMUM BLACK-BULB THERMOMETER *in vacuo* exposed to Sunshine *above* the Maximum Temperature in the shade at FORT RAE, 1882–3.

Days.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	August.
	°	°	°	°	°	°	°	°	°	°	°	°
1	—	27·1	27·3	5·7	17·7	26·9	40·1	42·5	32·7	28·3	29·9	29·6
2	—	26·2	7·4	2·8	19·2	26·3	34·9	44·2	39·8	29·4	30·6	30·7
3	—	23·8	1·3	1·4	14·0	28·3	40·2	46·5	46·7	33·8	32·6	28·1
4	—	24·7	4·2	14·1	18·5	11·4	39·2	41·1	36·6	35·3	31·7	33·8
5	12·3	23·9	0·0	14·1	17·7	23·1	36·3	42·9	38·2	31·3	36·0	31·9
6	30·4	8·3	7·8	17·9	17·4	7·6	41·5	42·1	33·4	35·8	31·8	32·1
7	27·0	16·6	19·1	20·6	18·4	29·3	38·5	43·3	43·5	34·3	30·8	30·2
8	28·1	27·2	24·2	12·2	2·4	10·3	36·6	43·6	40·7	20·4	35·3	33·3
9	26·7	24·2	14·2	13·4	15·8	29·1	37·9	43·3	41·8	31·1	32·2	33·4
10	27·9	25·8	29·8	10·9	17·6	19·0	40·1	44·9	39·1	30·6	30·8	31·9
11	13·8	5·6	19·2	4·4	4·1	29·8	37·3	38·7	31·6	28·2	21·9	27·7
12	16·6	2·6	20·0	3·1	20·2	29·5	42·6	44·9	33·1	28·1	27·9	26·8
13	18·9	5·9	22·2	4·1	18·6	31·7	39·1	32·3	30·2	33·3	36·0	25·6
14	34·6	6·4	7·2	0·0	19·3	31·4	41·2	43·0	31·6	33·8	36·5	13·9
15	24·4	28·3	9·3	1·6	− 0·3	31·8	42·3	41·2	31·7	33·8	35·7	32·1
16	32·8	27·4	16·0	1·0	15·7	32·6	44·9	34·8	31·9	32·7	29·2	17·3
17	23·7	21·8	0·9	14·3	22·0	20·5	41·2	34·0	33·3	33·6	29·2	33·8
18	28·4	3·1	8·2	17·3	21·8	30·4	41·5	35·7	34·4	30·5	28·7	28·9
19	27·3	20·1	4·2	6·7	22·4	30·6	40·7	36·0	33·8	29·1	32·0	26·6
20	24·1	6·9	6·9	16·3	22·2	24·7	40·8	33·5	35·1	25·2	30·1	35·5
21	33·4	3·4	14·6	9·6	13·6	32·4	37·7	22·1	34·7	32·6	33·1	32·3
22	26·1	6·6	1·6	1·1	22·8	31·9	40·7	42·7	32·7	36·6	32·2	33·2
23	27·6	3·1	3·1	17·4	21·4	34·1	41·0	38·4	29·7	39·8	34·2	28·2
24	23·2	8·5	0·7	3·6	25·9	28·3	42·1	34·1	28·2	35·6	33·4	29·4
25	27·1	6·2	1·3	14·0	26·3	13·8	43·7	31·7	34·0	28·2	16·7	32·2
26	29·6	25·9	2·6	15·1	9·6	16·5	43·6	30·3	29·5	33·1	33·9	29·3
27	11·8	6·7	23·1	15·0	4·2	29·8	41·2	35·8	34·7	28·7	39·2	29·2
28	31·6	6·1	2·1	16·3	8·0	35·3	37·8	36·1	28·2	29·7	28·0	28·8
29	32·5	5·5	19·3	17·5	25·9	—	41·2	40·9	30·1	20·4	28·1	32·9
30	13·4	6·7	21·2	5·9	27·4	—	41·3	32·8	22·4	29·4	28·5	17·9
31	—	10·4	—	17·5	27·7	—	38·2	—	35·3	—	31·0	28·4

Readings of a MINIMUM THERMOMETER exposed on the Ground to the Sky at FORT RAE, 1882–3.

Days.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	August.
	°	°	°	°	°	°	°	°	°	°	c	°
1	—	−12·5	−20·0	−38·6	−41·4	−43·3	−37·8	−25·7	− 8·9	− 5·4	8·7	9·4
2	—	− 5·6	−14·2	−31·8	—	−40·0	−31·6	−22·3	− 4·2*	− 0·6	8·3	10·8
3	—	−10·6	−15·2	−26·6	−46·7	−25·9	−35·6	−15·6	−14·7	0·9	12·4	10·3
4	—	− 8·1	−11·9	−34·9	−40·8	—	−38·3	−29·8	−21·1	− 1·7	7·1	7·1
5	—	− 5·0	−14·0	−35·0	−40·0	—	−37·8	−28·3	−15·4	1·1	3·9	1·1
6	—	− 7·8	−21·4	−37·8	−39·4	−31·4	−34·2	−19·4	−13·4	1·4	7·2	11·3
7	—	1·7	—	−33·3	−35·6	−23·3	−30·6	−27·2	−13·7	4·1	6·1	3·2
8	− 2·3	− 3·6	−37·5	−30·7	−30·6	−31·2	−25·3	−22·2	−11·7	1·1	2·2	− 2·8
9	− 6·5	− 7·5	−25·1	−28·6	−29·4	−25·4	−29·8	−17·8	−12·0	− 4·3	6·7	3·8
10	1·7	− 7·2	−18·8	−33·8	−32·2	−41·5	−21·6	−18·3	− 3·4	2·7	5·4	5·6
11	5·0	− 2·3	−16·7	−34·5	—	—	−18·9	−16·2	−10·4	0·6	7·8	10·0
12	8·9	0·8	−21·6	−32·7	−29·7	—	−22·0	−14·9	−11·7	− 0·6	4·2	11·1
13	5·0	1·9	−17·3	−38·4	−29·0	−43·1	−18·5	−14·2	− 9·4	0·3	0·9	7·2
14	− 1·1	0·1	−26·9	−43·6	−35·7	−42·8	−32·1	−19·1	−12·1	4·4	3·6	11·6
15	− 5·6	− 0·1	−12·8	−37·5	—	−41·3	−30·4	−15·1	− 4·4	5·2	− 2·8	10·0
16	− 0·6	− 9·2	−11·4	−33·2	−36·3	−40·2	−20·9	−18·2	− 4·4	4·4	− 2·8	− 2·4
17	− 3·3	− 6·0	−18·9	−26·9	−44·4	−22·1	−40·4	−17·5	− 2·4	− 2·5	0·1	9·1
18	4·7	− 7·5	−16·1	−31·2	−43·9	−32·2	−35·9	−17·7	− 2·6	− 3·3	− 1·8	2·5
19	6·4	− 4·2	−14·5	−39·2	−33·3	−25·3	−32·7	−13·6	1·0	1·3	2·1	3·3
20	− 0·3	− 5·1	−17·1	−38·9	−33·4	−20·8	−22·6	−11·8	− 1·2	− 0·1	1·6	4·7
21	1·4	− 2·8	−25·0	−31·7	−39·4	−26·6	−29·1	0·0	− 4·6	5·6	3·2	− 3·3
22	− 9·4	− 3·9	−28·9	−27·3	−45·2	−25·0	−28·9	− 1·2	0·5	9·8	7·6	1·7
23	2·5	− 1·7	−17·3	−16·7	−42·2	−23·5	−31·9	− 7·2	− 3·6	6·5	8·4	− 4·3
24	3·9	− 3·3	−10·7	−32·0	−37·6	−35·9	−37·3	− 8·5	− 7·8	7·7	8·3	− 1·1
25	3·9	− 5·0	−10·6	−31·2	−33·2	−24·6	−33·8	− 8·1	0·6	8·4	9·1	4·9
26	1·4	− 4·7	−12·2	−26·2	—	−18·3	−30·4	− 7·4	− 3·3	7·4	6·1	− 2·6
27	− 1·9	− 1·7	−24·4	−16·7	—	—	−27·0	− 7·8	− 5·3	10·1	2·2	− 1·0
28	−13·6	− 2·2	−34·0	−23·4	—	—	−27·2	− 1·1	− 5·3	− 0·1	1·7	− 2·3
29	− 4·7	0·1	−22·6	−32·3	−36·2	—	−29·0	− 3·4	− 5·9	4·4	− 2·8	− 0·9
30	− 9·4	− 6·7	−34·7	−33·8	−40·5	—	−31·2	− 5·6	− 0·6	0·1	3·0	2·8
31	—	− 6·8	—	−36·7	−33·1	—	−31·1	—	− 2·4	—	5·7	4·6

* Covered with snow.

Terrestial Radiation or the defect of a MINIMUM THERMOMETER exposed on the ground to the sky *below* the Minimum Temperature in the shade at FORT RAE, 1882–3.

Days.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	August.
	°	°	°	°	°	°	°	°	°	°	°	°
1	—	8·9	1·9	2·9	3·7	3·4	4·3	4·5	2·5	3·1	3·7	5·4
2	—	9·7	1·7	1·8	—	3·4	3·3	0·8	+0·4	6·4	4·8	4·2
3	—	8·9	1·8	+0·9	3·7	1·7	2·3	1·2	0·7	4·6	2·6	4·9
4	—	8·1	+1·1	2·9	0·0	—	2·3	6·1	3·2	4·1	1·8	6·0
5	—	6·7	1·1	0·9	0·5	—	2·2	4·9	1·6	2·2	5·8	9·6
6	—	7·5	4·1	2·1	0·9	3·2	0·9	1·5	3·3	1·6	3·4	3·4
7	—	0·0	-	3·7	0·4	1 9	5·5	4·4	2·1	1·3	7·5	8·6
8	6·1	5·0	10.2	1·2	+2·3	7·3	1·6	2·3	2·2	0·8	10·5	12·3
9	9·8	8·3	1·2	1·2	0·5	5·7	4·5	0·8	2·9	7·9	8·3	7·2
10	7·8	7·5	1·4	1·6	3·9	2·1	0·5	1·8	2·1	3·4	8·4	6·6
11	4·7	2·2	6·8	1·1	—	—	1·7	1·4	6·7	3·3	1·1	4·0
12	1·7	0·0	6·0	0·8	1·5	—	1·9	1·4	7·2	3·9	4·5	3·8
13	1·1	1·4	3·2	2·7	1·7	6·4	1·0	2·4	8·6	4·2	10·1	8·1
14	3·1	0·0	7·0	4·4	1·6	3·9	2·9	1·6	9.9	1·5	8·1	2·1
15	8·1	0·2	0·8	1·2	—	4·8	1·4	2·4	3·3	2·1	13·2	1·3
16	5·6	6·7	2·9	3·2	2·8	6·8	+0·2	1·1	4·2	3·4	13·0	10·2
17	5·6	0·4	3·4	+0·6	4·4	1·6	0·6	1·9	3·7	9·9	12·6	1·3
18	2·5	2·5	3·7	1·5	0·7	3·0	4·0	2·0	3·7	9·2	13·7	6·6
19	2·2	2·2	6·9	1·8	2·0	1·1	2·2	1·3	0·6	4·8	11·2	7·8
20	6·9	2·4	3·8	2·5	0·2	1·0	4·0	1·6	7·5	5·7	12·7	2·2
21	2·2	+0·8	7·2	1·5	0·7	3·7	2·3	0·2	6·6	1·4	12·2	6·6
22	10·3	3·3	6·7	2·6	2·8	1·5	3·9	+0·9	1·4	0·8	6·6	5·6
23	2·5	0·6	1·4	0·8	0·0	0·4	+0·3	+1·0	2·7	2·7	5·2	11·2
24	1·4	+0·6	0·9	2·5	0·3	2·4	3·4	0·2	6·7	3·6	2·6	6·7
25	3·3	0·3	0·5	1·4	0·2	+1·4	1·7	3·3	1·2	3·9	0·9	3·9
26	2·8	0·0	0·7	5·5	—	0·2	0·7	3·5	5·1	5·3	4·1	8·4
27	2·2	0·0	1·9	3·6	—	—	1·7	4·4	5·6	+1·1	7·8	8·7
28	10·0	0·3	5·3	1·2	—	—	1·3	0·3	7·3	5·3	7·1	10·4
29	1·9	0·0	2·1	2·1	1·3	—	5·7	2·3	7·2	4·4	13·0	5·6
30	6·9	+1·4	3·4	3·7	2·2	—	3·3	0·3	4·9	8·3	11·8	3·1
31	—	+0·9	—	2·1	0·7	—	3·7	—	1·4	—	9·8	0·1

Corrected Readings of a THERMOMETER exposed

Days.		1	2	3	4	5	6	7	8	9	10	11	Noon.
		°	°	°	°	°	°	°	°	°	°	°	°
Jan.	22	—	—	—	—	—	—	—	48·8	49·6	—	—	41·4
	23	44·5	44·5	41·4	44·3	44·0	44·0	43·8	43·5	41·3	43·5	41·5	40·0
	24	40·5	40·5	40·0	40·0	39·5	39·5	38·6	38·6	38·0	36·0	—	—
	25	—	—	—	—	—	—	—	—	33·5	—	—	—
	29	—	—	—	—	—	36·6	35·9	36·9	38·5	38·5	37·2	35·1
	30	39·5	—	39·6	—	41·6	41·6	43·6	44·1	44·9	—	—	—
	31	34·9	34·9	34·9	36·9	36·9	—	36·4	34·7	—	—	—	—
Feb.	1	—	—	40·4	—	48·1	48·8	49·5	46·7	49·0	48·6	39·7	37·6
	2	—	—	—	—	—	—	—	41·3	44·6	39·5	37·4	—
	3	—	—	—	—	—	—	—	—	—	—	—	—
	4	—	—	—	—	—	23·4	—	—	—	—	—	—
	6	—	—	—	—	—	—	31·4	31·8	—	—	—	—
	10	36·4	44·1	38·2	37·5	37·6	40·3	42·7	42·3	43·1	—	—	—
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	31·9	—	31·3	31·7	31·6	31·3	31·8	33·1	31·8	31·3	—	—
	13	38·6	39·3	39·8	42·1	45·9	46·2	46·8	46·4	44·1	39·2	35·4	36·4
	14	38·8	40·3	40·3	40·3	46·7	47·7	43·1	47·2	43·1	43·1	37·0	34·4
	15	45·2	44·9	43·6	43·3	38·5	39·2	44·2	43·9	43·7	34·9	—	29·4
	16	41·8	40·8	44·3	40·6	38·0	37·1	39·0	33·9	33·4	—	—	—
	17	—	—	—	—	—	—	—	—	—	—	—	—
	18	—	—	—	—	—	—	—	33·9	36·9	29·8	24·2	—
	19	25·4	29·8	29·8	27·3	28·3	—	—	—	25·4	—	20·7	19·7
	20	21·9	18·7	17·8	—	—	19·1	19·1	17·6	16·4	13·7	—	—
	21	29·8	23·7	22·2	22·2	—	—	—	—	—	20·1	18·9	18·1
	22	21·1	—	26·4	25·7	25·7	—	—	—	—	—	—	—
	23	—	—	—	—	—	—	—	—	—	—	—	—
	24	36·7	34·9	37·6	39·3	38·9	37·6	35·4	35·9	31·6	—	—	—
	28	—	—	—	—	—	—	—	—	—	—	—	—
Mar.	1	42·6	42·1	42·7	36·9	35·7	35·9	—	—	—	—	—	—
	2	—	—	28·9	32·6	31·8	31·8	—	30·8	28·0	—	—	—
	3	31·7	31·9	32·4	36·4	34·7	35·8	36·9	35·9	—	—	31·1	29·6
	4	38·5	36·1	39·1	38·2	38·0	38·5	38·5	—	—	—	—	—
	5	35·2	40·3	38·0	37·7	37·7	38·0	38·0	36·9	33·9	—	—	—
	6	34·4	—	33·4	—	—	—	—	—	—	—	—	—
	7	26·7	30·6	30·7	26·8	—	—	—	—	—	—	—	—
	8	27·8	—	—	—	—	—	—	—	—	—	—	—
	9	28·8	—	—	—	—	—	—	—	—	—	—	—
	11	17·6	17·6	17·1	18·0	—	—	—	—	—	—	—	—
	14	—	—	—	30·6	32·3	32·9	31·8	28·8	—	—	—	—
	16	—	—	—	—	—	—	—	—	—	—	—	—
	17	41·8	41·3	42·6	41·8	41·1	42·3	41·6	—	—	—	—	—
	18	31·8	38·2	33·9	33·8	35·4	36·5	35·4	—	—	—	—	—
	21	—	—	—	29·3	29·1	28·7	—	—	—	—	—	—
	22	27·3	29·6	31·7	—	—	—	—	—	—	—	—	—
	23	—	—	—	—	—	—	—	—	—	—	—	—
	24	36·9	41·1	36·9	36·4	37·0	40·9	—	—	—	—	—	—
	25	34·4	34·6	35·0	34·2	34·2	34·9	—	—	—	—	—	—
	26	29·9	29·8	30·0	29·6	30·4	31·3	—	—	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	—	—	—
	29	27·2	30·3	28·3	30·8	31·3	31·3	—	—	—	—	—	—
	30	25·7	30·8	31·3	31·3	33·1	32·8	—	—	—	—	—	—
	31	31·1	32·1	33·1	32·8	31·8	32·4	—	—	—	—	—	—
Apr.	3	—	—	—	—	—	—	—	—	—	—	—	—
	4	24·8	25·2	29·6	30·3	28·4	30·8	—	—	—	—	—	—
	5	27·8	27·3	26·0	26·8	27·5	27·8	—	—	—	—	—	—
	6	20·1	—	—	—	—	—	—	—	—	—	—	—
	10	—	17·6	17·1	18·2	18·6	—	—	—	—	—	—	—
	12	12·9	13·4	13·9	—	—	—	—	—	—	—	—	—
	15	—	—	—	—	—	—	—	—	—	—	—	—
	16	16·5	—	17·6	18·0	17·8	—	—	—	—	—	—	—
	17	—	—	—	17·2	—	—	—	—	—	—	—	—
	18	—	—	17·7	17·2	19·3	—	—	—	—	—	—	—
May	3	—	—	—	—	—	—	—	—	—	—	—	—
	4	20·8	20·6	20·2	—	—	—	—	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—
	7	—	13·4	13·8	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—
	9	9·5	9·5	11·9	10·4	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—
	11	5·8	—	10·1	—	—	—	—	—	—	—	—	—
	12	12·2	7·3	6·3	6·7	—	—	—	—	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	—	—	—
	14	10·4	11·4	11·4	—	—	—	—	—	—	—	—	—

on the Ground to the clear Sky, at Fort Rae, 1883.

Days.		1	2	3	4	5	6	7	8	9	10	11	Midnight.
		°	°	°	°	°	°	°	°	°	°	°	°
Jan.	22	41·6	—	45·0	45·8	45·3	45·6	41·5	—	44·1	44·9	45·5	44·5
	23	41·5	43·2	44·4	45·5	44·5	43·9	44·0	42·4	41·6	41·7	41·6	40·9
	24	—	—	—	—	—	—	—	—	—	—		—
	25	—	—	—	—	—	—	—	—	—	—	—	—
	29	36·2	36·4	36·9	36·9	—	—	39·0	—	—	—	—	39·3
	30	—	—	—	—	—		35·4	36·9	36·2	37·6	36·1	36·2
	31	—	—	—	—	—		—	—	37·9	—	39·1	—
Feb.	1	35·9	36·9	36·8	—	35·2	—	—	—	—	—	—	—
	2	—	—	—	—	—	—	—	—	—	—	—	—
	3	26·7	26·6	29·1	35·2	36·5	34·0	33·4	33·4	32·1	33·1	—	—
	4	—	—	—	—	—	—	—	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—
	11	—	—	—	—	—	—	—	30·6	30·4	31·8	31·0	—
	12	27·7	27·8	—	—	28·8	—	—	—	31·2	33·4	36·9	38·0
	13	34·7	33·4	32·9	34·4	34·4	36·4	37·6	38·2	38·2	38·0	38·5	37·7
	14	31·8	31·8	32·4	—	—	—	40·8	—	43·6	—	41·1	—
	15	—	—	—	—	40·7	43·6	43·7	41·3	44·7	45·9	41·6	40·6
	16	—	—	—	—	—	—	—	—	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	35·7	36·7	—
	18	—	—	—	—	—	26·9	27·3	26·7	25·7	—	24·2	26·2
	19	18·4	—	—	—	22·7	25·7	26·7	20·1	19·7	19·9	19·2	19·3
	20	—	—	—	—	23·7	—	26·2	23·5	21·9	25·9	24·2	27·8
	21	—	18·4	—	—	—	—	—	—	—	—	20·1	20·1
	22	—	—	—	—	—	—	—	—	—	—	—	—
	23	—	—	—	—	29·4	34·4	36·6	37·2	35·7	33·9	36·9	38·7
	24	—	—	—	—	—	—	—	27·8	28·3	—	—	—
	28	—	—	—	—	—	—	—	—	33·3	38·2	40·7	41·3
Mar.	1	—	—	—	—	—	—	—	—	28·6	27·3	26·0	28·3
	2	—	—	—	—	—	—	—	—	29·3	29·9	30·2	30·0
	3	—	—	—	—	38·9	41·4	41·6	41·6	43·1	42·8	40·8	40·9
	4	—	—	—	—	—	—	31·9	34·2	38·0	35·4	39·6	38·0
	5	—	—	—	—	—	31·9	32·9	34·4	34·2	33·7	34·7	—
	6		—	—	—	—	—	—	—	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	22·9	28·4	27·5
	8	—	—	—	—	—	25·2	26·3	30·6	31·8	32·9	32·9	29·6
	9	—	—	—	—	—	21·6	23·1	22·7	—	—	—	—
	11	—	—	—	—	—	—	—	—	22·2	19·8	20·2	—
	14	—	—	—	—	—	—	—	—	—	—	—	—
	16	—	—	—	—	—	—	—	—	—	37·9	38·8	38·8
	17	—	—	—	—	—	—	35·3	36·7	36·4	35·9	34·3	31·8
	18	—	—	—	—	—	—	28·3	30·3	30·8	—	32·4	—
	21	—	—	—	—	—	—	23·3	24·7	25·2	25·2	24·4	25·2
	22	—	—	—	—	—	—	—	—	—	—	—	—
	23	—	—	—	—	—	—	34·9	33·7	31·1	37·6	35·4	35·8
	24	—	—	—	—	—	—	30·3	30·8	31·9	32·4	33·5	33·8
	25	—	—	—	—	—	—	—	—	—	29·3	29·3	29·2
	26	—	—	—	—	—	—	—	—	—	—	—	—
	28	—	—	—	—	—	—	18·8	21·4	22·6	—	—	26·0
	29	—	—	—	—	—	—	22·5	24·2	24·2	—	24·4	26·3
	30	—	—	—	—	—	—	22·6	25·7	28·0	—	26·7	29·9
	31	—	—	—	—	—	—	—	—	20·3	22·9	26·7	—
Apr.	3	—	—	—	—	—	—	—	—	—	—	23·4	23·7
	4	—	—	—	—	—	—	20·8	24·2	26·7	25·8	27·7	29·3
	5	—	—	—	—	—	—	—	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	—	—	—
	15	—	—	—	—	—	—	—	—	—	—	—	17·7
	16	—	—	—	—	—	—	—	—	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	—	12·9	16·9
	18	—	—	—	—	—	—	—	—	11·3	10·9	—	—
May	3	—	—	—	—	—	—	—	—	16·3	16·5	17·8	19·6
	4	—	—	—	—	—	—	—	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	12·0
	7	—	—	—	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	6·8	8·3	8·3
	9	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	5·8
	11	—	—	—	—	—	—	—	—	—	—	9·4	11·9
	12	—	—	—	—	—	—	—	—	—	7·3	8·6	8·5
	13	—	—	—	—	—	—	—	—	—	2·3	4·2	10·1
	14	—	—	—	—	—	—	—	—	—	—	—	—

Earth Temperatures observed at Fort Rae, 1882–3.

Days.	September. 1 ft.	2 ft.	3 ft.	4 ft.	October. 1 ft.	2 ft.	3 ft.	4 ft.	November. 1 ft.	2 ft.	3 ft.	4 ft.	December. 1 ft.	2 ft.	3 ft.	4 ft.
	°	°	°	°	°	°	°	°	− °	− °	− °	− °	− °	− °	− °	− °
1	—	—	—	—	0·4	1·2	1·1	0·8	3·7	1·0	0·6	0·1	8·0	2·6	0·8	0·4
2	—	—	—	—	1·3	0·5	1·2	0·8	3·7	1·2	0·8	0·5	(7·5	2·7	1·0	0·4)
3	—	—	—	—	1·7	1·2	1·4	0·8	3·9	1·7	0·7	0·6	5·0	2·9	1·0	0·3
4	—	—	—	—	1·2	1·1	0·8	0·6	2·8	1·2	0·6	0·5	—	—	—	—
5	—	—	—	—	1·7	1·2	1·1	0·4	3·1	0·4	0·4	0·4	10·1	3·4	1.2	0·4
6	—	—	—	—	1·4	0·9	0·6	0·3	3·6	1·0	0·4	0·3	—	—	—	—
7	5·2	3·7	2·5	1·6	1·7	1·1	0·9	0·8	3·9	1·4	0·8	0·9	11·1	5·3	1·7	0·6
8	5·8	4·0	2·8	1·7	1·1	0·7	0·7	0·6	5·9	1·4	0·5	0·4	—	—	—	—
9	6·9	4·3	1·9	1·7	1·1	1·2	1·1	1·4	5·8	1·0	0·4	0·4	10·6	4·1	1·6	0·5
10	7·2	4·6	3·3	1·7	0·8	0·8	0·6	0·3	5·0	1·6	0·6	0·5	—	—	—	—
11	6·9	4·0	2·8	1·9	0·6	0·7	0·4	0·3	4·0	1·4	0·5	0·3	12·1	4·8	1·8	0·5
12	7·2	4·0	2·8	1·7	1·9	1·3	0·3	0·6	4·9	1·4	0·4	0·3	—	—	—	—
13	6·1	4·0	2·8	1·7	1·7	1·1	0·6	0·3	3·9	1·6	0·6	0·6	10·6	4·8	2·1	0·6
14	4·4	3·2	2·2	1·4	0·9	0·7	0·6	0·3	4·4	1·6	0·6	0·3	—	—	—	—
15	4·2	3·4	2·2	1·4	1·1	0·9	0·7	0·3	4·2	1·6	0·4	0·3	11·7	5·5	2·1	0·6
16	4·2	2·9	1·9	1·4	0·5	0·7	0·3	0·3	3·3	1·6	0·6	0·4	—	—	—	—
17	3·9	3·2	2·2	1·4	−0·6	−0·2	−0·2	−0·3	4·2	1·5	0·5	0·4	9·4	4·7	2·8	0·7
18	6·4	3·7	2·8	1·7	−0·3	0·7	0·6	0·3	4·6	1·6	0·6	0·3	—	—	—	—
19	6·9	4·6	2·5	1·7	−0·4	0·1	0·1	0·2	3·9	1·5	0·6	0·4	8·9	4·4	2·2	0·7
20	6·1	4·0	2·8	1·9	−0·4	−0·2	0·0	−0·1	4·6	1·7	0·6	0·3	—	—	—	—
21	4·2	3·2	1·9	1·4	−0·2	−0·1	0·0	−0·1	3·4	1·8	0·6	0·3	9·7	4·6	2·1	0·8
22	3·3	2·9	1·9	1·4	−0·3	−0·1	0·1	0·0	7·6	2·3	0·6	0·5	—	—	—	—
23	4·2	2·9	2·5	1·4	−0·3	0·1	0·0	0·1	5·1	1·6	0·6	0·3	7·9	4·3	2·1	0·8
24	5·0	3·2	2·5	1·4	−0·6	−0·2	−0·1	−0·1	4·7	2·1	0·6	0·3	—	—	—	—
25	6·4	3·4	2·5	1·4	−1·2	−0·4	−0·1	−0·1	4·4	2·1	0·7	0·5	4·4	2·2	2·2	1·1
26	4·4	3·2	2·5	0·8	−0·9	−0·3	−0·2	−0·2	4·6	1·9	0·7	0·3	—	—	—	—
27	2·5	2·3	1·7	0·8	−1·1	−0·4	−0·4	−0·4	5·1	2·0	0·8	0·3	6·7	3·7	2·0	0·9
28	1·5	1·9	1·7	1·1	−0·2	−0·2	−0·1	−0·2	6·2	2·2	0·9	0·6	—	—	—	—
29	0·8	1·5	1·5	1·2	−0·5	−0·2	0·0	0·0	5·6	2·4	1·6	0·3	8·1	3·7	1·8	0·8
30	1·1	1·5	1·2	0·7	−1·7	−1·0	−0·8	−0·5	5·9	2·6	0·8	0·3	—	—	—	—
31	—	—	—	—	−2·2	−0·9	−0·6	−0·3	—	—	—	—	9·5	4·3	1·9	1·1
Mean	+4·8	+3·3	+2·3	+1·4	+0·3	+0·4	+0·3	+0·2	−4·5	−1·6	−0·6	−0·4	−9·0	−4·1	−1·8	−0·7

Days.	January. 1 ft.	2 ft.	3 ft.	4 ft.	February. 1 ft.	2 ft.	3 ft.	4 ft.	March. 1 ft.	2 ft.	3 ft.	4 ft.	April. 1 ft.	2 ft.	3 ft.	4 ft.
	− °	− °	− °	− °	− °	− °	− °	− °	− °	− °	− °	− °	− °	− °	− °	− °
1	—	—	—	—	14·8	6·4	3·6	2·6	9·7	5·4	4·7	3·7	12·1	6·5	5·9	4·6
2	13·6	5·2	2·2	0·9	(14·8	6·5	4·0	2·7)	—	—	—	—	—	—	—	—
3	—	—	—	—	13·1	6·8	4·1	2·8	11·3	5·6	4·7	3·7	11·4	6·3	5·8	4·6
4	14·2	6·8	2·7	1·1	—	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	10·9	6·4	4·3	2·8	13·1	6·1	4·8	3·7	11·9	6·1	5·8	4·6
6	14·4	6·6	3·2	1·4	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	10·2	6·0	4·3	3·1	12·6	6·3	4·9	3·8	11·5	6·0	5·7	4·6
8	13·8	6·8	3·3	1·5	—	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	10·2	6·1	4·3	3·2	12·3	6·2	4·9	3·9	10·8	5·9	5·5	4·6
10	12·6	6·4	3·4	1·7	—	—	—	—	—	—	—	—	—	—	—	—
11	—	—	—	—	9·3	5·4	4·2	3·1	11·3	6·0	5·1	3·9	9·9	5·5	5·5	4·5
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13	—	—	—	—	11·8	5·4	4·1	3·1	10·4	5·9	5·1	4·2	8·8	5·0	5·2	4·4
14	12·0	6·2	2·4	1·8	—	—	—	—	—	—	—	—	—	—	—	—
15	14·8	7·7	3·8	1·7	12·6	5·7	4·2	3·2	12·4	5·9	5·2	4·1	8·8	4·9	5·2	4·4
16	(11·5	7·2	3·5	2·6)	—	—	—	—	—	—	—	—	—	—	—	—
17	12·1	6·4	3·4	2·8	12·1	6·0	4·3	3·3	14·5	6·1	5·1	4·1	7·9	4·6	4·9	4·3
18	(14·8	9·0	3·3	2·1)	—	—	—	—	—	—	—	—	—	—	—	—
19	15·7	7·7	4·3	2·2	12·1	6·0	4·6	3·4	13·8	6·4	5·3	4·2	4·7	2·5	4·3	3·8
20	(11·9	6·1	3·3	2·2)	—	—	—	—	—	—	—	—	—	—	—	—
21	12·1	6·6	3·3	1·7	11·2	5·9	4·6	3·4	12·6	6·4	5·4	4·3	3·9	2·9	3·8	3·4
22	(13·2	6·2	3·7	1·9)	—	—	—	—	—	—	—	—	—	—	—	—
23	14·2	6·4	3·8	2·2	11·8	5·9	4·7	3·5	13·2	6·4	5·4	4·3	3·9	2·3	3·8	3·2
24	(12·1	7·3	3·8	2·3)	—	—	—	—	—	—	—	—	—	—	—	—
25	14·2	7·6	3·9	2·2	12·1	6·0	4·7	3·7	14·2	6·6	5·4	4·4	3·4	1·9	3·2	2·8
26	(13·1	7·1	3·9	2·5)	—	—	—	—	—	—	—	—	—	—	—	—
27	12·1	7·2	4·3	2·4	9·9	5·8	4·6	3·6	13·7	6·7	5·6	4·4	2·9	0·8	2·5	2·6
28	(11·1	6·6	4·1	2·3)	—	—	—	—	—	—	—	—	—	—	—	—
29	11·2	6·1	4·1	2·8	—	—	—	—	13·0	6·7	5·9	4·5	2·5	0·2	0·8	1·1
30	(12·6	6·6	3·9	2·6)	—	—	—	—	—	—	—	—	2·2	0·2	0·9	1·2
31	11·5	7·1	4·2	2·7	—	—	—	—	12·6	6·5	5·8	4·6	—	—	—	—
Means	−13·2	−6·7	−3·5	−1·9	−11·6	−6·0	−4·3	−3·2	−12·6	−6·2	−5·2	−4·1	−7·3	−3·8	−4·3	−3·7

N.B.—The observations with brackets have not been used in taking the means.

Earth Temperatures observed at FORT RAE, 1882–3—*continued.*

Days.	May.				June.				July.				August.			
	1 ft.	2 ft.	3 ft.	4 ft.	1 ft.	2 ft.	3 ft.	4 ft.	1 ft.	2 ft.	3 ft.	4 ft.	1 ft.	2 ft.	3 ft.	4 ft.
	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
1	−2·2	−0·2	0·8	1·3	3·4	0·7	−0·7	−0·6	8·1	4·0	1·8	0·5	10·5	5·7	3·3	2·2
2	(−2·1	−0·2	0·9	1·2)	—	—	—	—	—	—	—	—	—	—	—	—
3	−2·8	−0·3	1.1	1·2	5·5	1·1	−0·6	−0·5	9·6	4·2	2·2	0·7	10·2	5·8	3·4	2·1
4	(−2·3	−1·4	0·9	1·2)	—	—	—	—	—	—	—	—	—	—	—	—
5	−2·3	−0·2	1·1	1·2	6·2	1·6	−0·6	−0·5	5·4	4·6	2·2	0·8	9·4	6·1	3·9	2·3
6	(−2·3	−0·3	1·1	1·2	—	—	—	—	—	—	—	—	—	—	—	—
7	−2·2	−0·2	1·1	1·1	5·3	1·7	−0·6	−0·4	9·3	4·6	2·2	0·9	9·6	6·1	3·8	2·3
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	−1·8	−0·2	1·1	1·1	5·3	1·9	−0·5	−0·3	9·8	4·6	2·6	1·1	8·8	5·8	3·8	2·5
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	−0·7	−0·2	1·1	1·1	6·2	0·7	−0.6	−0·4	8·8	5·2	2·8	1·1	9·7	5·8	3·9	2·6
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13	0·9	−0·1	1·1	1·0	6·3	2·5	−0·3	−0·3	8·6	4·8	2·6	1·1	9·9	6·1	3·8	2·4
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15	1·0	−0·1	1·1	1·1	6·3	2·4	0·0	−0·2	9·0	5·1	2·8	1·3	8·9	5·9	3·8	2·6
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
17	2·1	−0·1	1·1	1·0	6·7	2·9	0·0	−0·4	9·4	5·2	2·8	1·4	8·0	5·7	3·9	2·7
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
19	2·3	0·1	0·9	0·8	6·2	2·7	0·3	−0·2	9·9	5·5	3·0	1·6	9·2	5·7	3·8	2·6
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21	3·7	0·1	1·1	0·9	6·7	3·0	0·6	−0·2	11·6	5·8	3·3	1·7	6·3	5·2	3·7	2·6
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23	2·7	0·1	1·1	0·8	6·8	3·2	0·8	−0·2	9·7	5·8	3·3	1·8	7·2	5·1	3·6	2·6
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	3·8	0·2	0·8	0·6	8·3	3·7	1·2	−0·2	8·8	5·6	3·3	1·8	7·1	4·8	3·3	2·3
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27	4·4	0·3	1·0	0·6	9·0	4·6	2·1	0·0	8·3	5·2	3·2	1·9	7·1	4·8	3·3	2·3
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
29	4·7	0·6	0·8	0·6	7·7	4·2	1·8	0·4	7·9	4·9	3·1	1·8	6·7	5·0	3·3	2·6
30	—	—	—	—	—	—	—	—	(9·2	5·1	3·0	1·8	—	—	—	—
31	3·3	0·8	0·6	0·5	—	—	—	—	8·6	5·3	2·9	1·8	6·1	4·6	3·2	2·3
Mean	+1·1	+0·0	−1·0	−0·9	+6·4	+2·5	+0·2	−0·3	+8·9	+5·0	+2·8	+1·3	+8·4	+5·5	+3·6	+2·4

FORT RAE.

MAGNETICAL OBSERVATIONS.

MAGNETIC OBSERVATIONS.

The Observations made on Terrestrial Magnetism were of two kinds, Absolute and Variation or Differential.

ABSOLUTE OBSERVATIONS AND ADJUSTMENTS.

The observatory in which the absolute observations were made was a log hut about 15 ft. (4·5 m.) × 8 ft. (2·5 m.) with a mud fireplace in one corner. No iron was used in its construction.

Absolute observations were made in the neighbourhood of the observatory with satisfactory results, no sign of any local magnetic influence being observed.

Horizontal Intensity (X).

The absolute value of the horizontal component of the Earth's magnetic force was found by means of vibrations and deflections with the unifilar magnetometer No. 102, by Jones, London. During every observation the bifilar was read at short intervals, and the mean of these readings was assumed to correspond with the value of the horizontal force X found by means of the absolute observation.

The following are the instrumental constants of the unifilar which were ascertained at Kew before its departure, and verified on the return of the instrument.

Graduation of deflection bar:—

Apparent distance from centre of instrument.		True distance at temp. 0° Cent.
0·20 metre	=	0·199925 metre
0·25 „	=	0·249925 „
0·30 „	=	0·299925 „
0·35 „	=	0·349925 „
0·40 „	=	0·399925 „

Deflection apparatus, angular value of one scale division = 2′ 1″.

Vibration magnet, angular value of one scale division = 2′ · 25.

The deflecting magnet employed was marked — N 5.

The suspended „ „ — N a.

For deflecting magnet:

Correction to 0° Cent. $= 0 \cdot 000224\ (t_0 - 0°) + 0 \cdot 0000018\ (t_0 - 0°)^2$.

Induction coefficient $\mu = 0 \cdot 00000637$.

Log. π^2 K at 0° Cent. $= 9 \cdot 50076$.

Dimensions of inertia cylinder: length = 0 · 103617 metre.
„ „ „ diameter = 0 · 00998 metre.
„ „ „ weight = 68 · 2799 grammes.

The following table gives the results of the observations, each value of X being obtained from a pair of observations, one of vibration and one of deflection; m being the magnetic moment of the magnetic needle used, and X the Earth's magnetic horizontal force.

TABLE 1.

Date.	*m*	X.	Corresponding British Measures.	Bifilar reading.	X reduced to 420 Bifilar Scale.	Corresponding British Measures.
1882.	C.G.S.	C.G.S.	Foot Grain Sec.	Scale divisions.	C.G.S.	Foot Grain Sec.
Sept. 29	·00068707	·076345	1·6558	425	·076250	1·6537
Nov. 11	617	6430	·6576	413	564	·6605
„ 16	472	6396	·6569	410	587	·6610
„ 30	458	6762	·6648	422	743	·6644
Dec. 8	626	6533	·6599	419	552	·6603
„ 25	539	6570	·6607	416	646	·6623
1883.						
Feb. 7	584	6521	·6596	423	464	·6584
March 5	557	6841	·6665	425	746	·6645
April 6	405	6565	·6605	408	794	·6655
May 12	457	6644	·6623	415	701	·6635
June 8	323	6579	·6609	417	636	·6621
„ 12	281	6786	·6653	422	748	·6645
July 12	262	6644	·6623	424	568	·6606
„ 31	220	6710	·6637	424	634	·6620
Aug. 14	237	6435	·6577	419	454	·6581
„ 16	287	6683	·6631	433	549	·6602
„ 28	328	7012	·6703	440	630	·6620
				Means -	·076604	1·6614

The values, as reduced to the same bifilar reading (420), were plotted down to scale and a curve drawn through them.

From this curve the following corrections were obtained for the change of zero of the bifilar.

TABLE 2.

						Scale Divisions.
1882.	Sept.	1	to	Oct.	2 (3 a.m.)	−15
1883.	Feb.	9	„	Feb.	13	+ 1
„	„	14	„	„	16	+ 2
„	„	17	„	„	19	+ 3
„	„	20	„	„	21	+ 4
„	„	22	„	„	23	+ 5
„	„	24	„	„	26	+ 6
„	„	27	„	March	2	+ 7
„	Mar.	3	„	„	7	+ 8
„	„	7	„	„	14	+ 9
„	„	14	„	April	21	+10
„	April	21	„	„	29	+ 9
„	„	30	„	May	6	+ 8
„	May	7	„	June	16	+ 7
„	June	17	„	„	19	+ 6
„	„	20	„	„	22	+ 5
„	„	23	„	„	26	+ 4
„	„	27	„	„	30	+ 3
„	July	1	„	July	5	+ 2
„	„	6	„	„	10	+ 1
„	„	10	„	Aug.	31	0

There was reason to believe that the bifilar subsequent to its adjustment at the beginning of September received a shock on the morning of October 2, at 3 a.m. This is corroborated by the low value of X given by the observation of 29th September, and by the sudden change in the readings at that time.

The mean of the values of X from the last column of table 1 is ·076604, which corresponds to 420 of the bifilar scale; when the bifilar readings are corrected by Table 2, this mean becomes ·076577.

The bifilar scale reading 400 was accordingly assumed to be = ·076200, and with the scale value found from deflections as mentioned below, p. 124, table 3 was computed for the reduction of the variation observations.

It appears from Table 1 that the value of m regularly decreased throughout the year, an assumption *a priori* probable, as the magnet was kept at a fairly even temperature, and never received any shock or blow.

In order to utilise observations of vibration unaccompanied by an observation of deflection, and *vice versâ*, so as to compare the observations with one another, and with the corresponding bifilar readings, the value of m was assumed to diminish uniformly, and the amount $t\,(\delta\, m)$ of the diminution after a time t, was obtained from the observed values of m, each value yielding an equation of condition, of the form $m = \mathrm{M} - t\,(\delta\, m)$.

The probable values of M and $\delta\, m$ having been found from these equations, a value of m was computed for every day on which an observation was made, and from it a value of X. derived. These values being reduced to the standard bifilar reading, the mean of 23 vibration observations was found to be ·076599, and of 19 observations of deflection ·076621. Giving half weight to the deflection observations, on account of their greater liability to error, the mean amounts to ·076606.

When the corrections from Table 2 are applied to the bifilar readings, this mean becomes ·076578, thus agreeing very closely with the value found above.

The probable error of a single observation of vibration is ·000052, and of an observation of deflection ·00008.

Table 3.

Corrected Scale Reading.	Absolute Horizontal Force, C.G.S.	Corrected Scale, Reading.	Absolute Horizontal Force, C.G.S.
Div.		Div.	
−600	0·05921	+100	0·07067
−500	·06073	+200	·07247
−400	·06230	+300	·07431
−300	·06389	+400	·07620
−200	·06553	+500	·07814
−100	·06720	+600	·08012
0	·06892	+700	·08216

Absolute Declination.

Observations for absolute declination were made with the above-mentioned unifilar, the declinometer being read simultaneously.

Each observation consisted of three or more readings of the collimator magnet with its "scale erect;" it was then turned 180° on its axis, and a like number of readings taken with the "scale inverted." The torsion was always removed from the suspension thread before commencing observations.

The astronomical meridian was determined by star observations with the transit theodolite to within a few seconds, and then indicated by fixed marks both north and south. As the same pillar was used both for the transit instrument and the unifilar, the observed magnetic declination could be referred directly to the meridian.

The following table gives the results of these observations, the readings being reduced to the declinometer scale reading 330.

Table 4.

Date.		Local Mean Time.	Absolute Declination.
1882.		h. m.	° ′ ″
September	24	1 39 p.m.	40 16 58 East
October	14	12 45 „	40 22 37
„	15	12 40 „	40 20 48
1883.			
February	15	12 50 „	40 20 49
May	1	11 3 a.m.	40 16 50
„	15	4 26 „	40 18 2
„	15	11 53 „	40 17 16
June	4	—	40 16 22
„	14	6 5 p.m.	40 10 0
„	15	3 38 „	40 9 16
July	2	3 30 „	40 4 52
„	15	12 12 „	40 3 38
„	22	12 30 „	40 3 16
August	2	3 30 „	40 2 26
„	12	4 30 „	40 2 45
„	24	3 14 „	40 0 13
„	30	12 45 „	40 0 18
		Mean - -	40 10 58

Table 5.

Observations of Inclination. (*See* p. 122.)

Date.	Needle	Observed Inclination.	Date.	Needle	Observed Inclination.
1882. d. h. m.		° ′	1883. d. h. m.		° ′
Sept. 14 11 50 a.m.	1	82 58·25	May 16 12 52 p.m.	2	82 53·4
„ 24 5 25 p.m.	2	„ 51·7	„ 22 12 37 „	1	„ 54·8
„ 29 1 55 „	1	„ 50·7	„ 22 6 32 „	1	„ 51·9
Oct. 13 11 15 a.m.	2	„ 57·8	„ 24 5 22 „	1	„ 48·0
„ 23 12 30 p.m.	1	„ 56·8	„ 25 6 22 „	1	„ 52·6
„ 29 12 30 „	1	„ 56·4	„ 26 12 37 „	1	„ 51·2
Nov. 4 11 15 a.m.	1	83 0·8	„ 26 3 12 „	1	„ 52·25
„ 14 3 0 p.m.	1	82 55·1	„ 28 11 7 a.m.	2	„ 57·2
„ 27 1 45 „	1	„ 58·9	„ 28 6 27 p.m.	2	„ 51·6
Dec. 3 12 0 noon	1	„ 59·0	„ 29 12 17 „	2	„ 54·2
„ 13 12 0 „	1	83 1·3	„ 29 6 12 „	2	„ 51·6
„ 22 1 25 p.m.	1	82 59·4	June 5 11 25 a.m.	1	„ 55·0
„ 23 1 0 „	1	„ 58·2	„ 13 10 35 „	2	„ 57·0
1883.			„ 22 1 30 p.m.	2	„ 55·4
Jan. 5 11 45 a.m.	1	„ 56·1	„ 26 12 30 „	1	„ 55·2
„ 9 12 25 „	1	„ 55·5	„ 27 12 50 „	2	„ 54·3
„ 17 1 45 p.m.	1	„ 52·5	„ 27 4 7 „	2	„ 49·8
„ 27 12 55 p.m.	1	„ 53·1	„ 29 12 25 „	1	„ 54·5
Feb. 5 1 55 p.m.	1	„ 53·2	July 5 6 30 „ d.	2	„ 45·9
„ 5 1 10 „	1	„ 55·0	„ 6 4 32 „	2	„ 50·5
„ 13 12 45 „	1	„ 54·6	„ 11 3 7 „	2	„ 50·7
„ 20 12 35 „	1	„ 51·9	„ 18 5 20 „	1	„ 47·5
Mar. 2 1 0 p.m.	1	„ 54·2	„ 19 12 12 „	1	„ 54·3
„ 5 12 0 noon	1	„ 53·9	„ 25 12 5 „	1	„ 56·0
„ 12 11 30 a.m.	1	„ 53·3	„ 25 6 25 „	1	„ 51·1
„ 19 11 30 „	1	„ 58·4	„ 30 10 33 a.m. d.	1	83 0·25
„ 27 3 15 p.m.	1	„ 49·7	„ 31 10 43 „ d.	1	„ 15·1
„ 31 4 45 „	2	„ 46·4	Aug. 7 1 5 p.m.	1	82 55·9
Apr. 5 4 30 „	2	„ 52·4	„ 13 3 20 „	1	„ 52·7
„ 12 1 25 „	1	„ 52·5	„ 13 7 5 „	1	„ 53·9
„ 20 5 30 „	1	„ 47·2	„ 21 6 52 „	1	„ 52·8
„ 28 5 10 „	1	„ 49·0	„ 25 3 52 „	2	„ 53·7
May 1 3 15 „	1	„ 48·8	„ 29 11 2 a.m.	2	„ 54·8
„ 9 11 40 a.m.	1	„ 56·6	„ 29 3 12 p.m.	2	„ 53·2
„ 10 4 40 p.m.	1	„ 49·9	Mean - - -		82 54·07

d. Magnetic disturbance was observed to be in progress during these observations.

The observations indicated that the zero value of the declinometer scale began to change slowly in April, and continued to move in the same direction until July. This was probably due to a movement of rotation in the wooden pillar caused by absorption of moisture in the spring. I noticed a movement in the same direction with the transit instrument, which, when directed to a fixed mark on one day, was often found on the following day to be pointing two or more minutes to the eastward of it.

Inclination.

For observations of inclination a dip circle by Barrow, London, with $3\frac{1}{2}$-inch (9 cms.) needles was used.

Table 5 gives the results of these observations. At every observation both ends of the needle were read in each of the usual four positions; the poles were then reversed and the readings repeated.

When the inclination was observed at Kew with this instrument, before leaving England, an almost identical value was afforded by needles 1 and 2, and no difference in the results obtained from them was observed at Fort Rae. The instrument was so much injured on its journey back that it was not possible to make any observations with it after its return to Kew.

An inspection of the observations showed that the value of the inclination varied at different times of the day, and they were accordingly grouped by hours with the following results.

Table 6.

Hourly Means of Inclination.

Hour.	Mean inclination.	Tan $^{-1}\frac{Y}{X}$
10 a.m.		82° 57'·0
10 to 11 „	82° 57'·0	
11 „		„ 56'·5
11 to 12 „	„ 56'·7	
12 „		„ 55'·6
12 to 1 p.m.	„ 54'·8	
1 „		„ 55'·2
1 to 2 „	„ 55'·1	
2 „		„ 54'·2
3 „		„ 53'·6
3 to 4 „	„ 52'·0	
4 „		„ 53'·2
4 to 5 „	„ 49'·8	
5 „		„ 52'·8
5 to 6 „	„ 48'·9	
6 „		„ 52'·7
6 to 7 „	„ 51'·1	
7 „		„ 53'·4
7 to 8 „	„ 53'·9	
8 „		„ 53'·5

The last column of the above table gives the value of the inclination as calculated from the absolute horizontal and vertical forces, X and Y being the mean values of the whole of the year's observations at those hours.

It corroborates the fact of the great diurnal variation of the inclination, and the mean value for the month or year will probably be more accurately found from the mean values of the vertical and horizontal forces than from the observations of inclination, which are too few in number and are not fairly distributed over the 24 hours.

Vertical Intensity (Y).

The absolute value of the vertical component of the Earth's magnetic force Y corresponding to a given reading of the balance magnetometer, was found from each value of the inclination δ, in conjunction with the corresponding value of the horizontal intensity X by the formula,

$$Y = X \tan. \delta.$$

These 61 values of Y were reduced to the same scale reading of the balance magnetometer; five of them were rejected by Pierce's criterion, and the mean of the remainder, 0·6176, was adopted as corresponding to the scale reading 1500, and with the scale value found below, Table 11 was computed for the reduction of the variation observations.

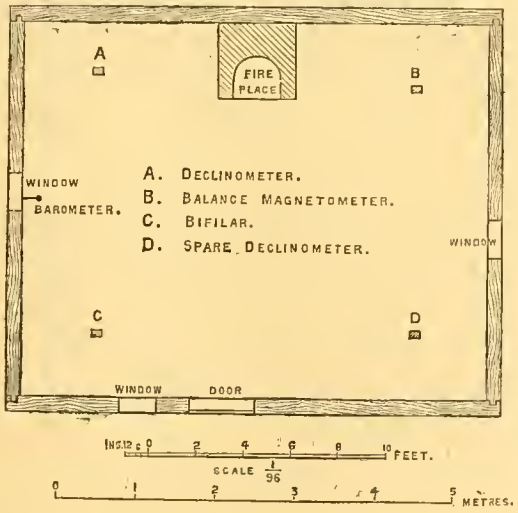
The probable error of this mean was found to be ·0004.

VARIATION OBSERVATIONS.

The observatory for the variation instruments was a log hut, 19 ft. 9 in. (6 m.) × 16 ft. 6 in. (5 m.), and from 7 ft. 6 in. (2·5 m.) to 15 ft. (4·5 m.) in height.

The floor was fastened with wooden pegs, the windows with copper nails. The walls were of wood and mud, the fireplace of mud and stone, which latter had no effect on the magnets.

The projection of the fireplace on either side screened the balance magnetometer and declinometer from the direct heat rays of the fire; the bifilar was screened by a table, which was nailed to the floor. The accompanying plan shows these details and the position and distance apart of the different instruments, which were mounted on wooden pillars about 0·2 metre in diameter, sunk about 1 m. in the ground.



Bifilar Magnetometer.

The horizontal intensity was recorded by means of the bifilar. A transportable Weber magnetometer with 3-inch (7 cm.) needle, hung in a loop of unspun silk fibre, was adjusted by placing the instrument with the telescope to the North, and in the magnetic meridian, the interval between the suspending threads being so regulated that when the torsion circle was turned through 138°, the reflection of the centre division of the scale coincided with the cross wire of the telescope.

Although it was found that the instrument thus adjusted was slightly too sensitive, it was thought best to leave it untouched, rather than to break the continuity of the observations by altering the adjustment.

The following deflections of the bifilar magnet with the unifilar magnet (N 5) were observed for the determination of the scale value of the instrument.

Table 7.

Date.	Temp. Cent.	Mean deflection in scale divisions.				
		At 562 mm.	At 560 mm.	At 555 mm.	At 550 mm.	At 540 mm.
1882.	°	Sc. Div	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
Sept. 11	14·7	400·25	407·25		435·5	
,, 12	12·4		410		434·1	
Oct. 12	12·0		407·75		435	
Nov. 10	9·2		407		429·25	
Dec. 12	6·8		404	422	435·5	
1883.						
Feb. 7	2·5		407·4		431	
April 6	12·4		405·1		425·9	450
May 12	14·7				426·1	
June 10	18·9		404·4		425·8	450
,, 10	16·8		401·2		427·75	449·4
July 20	23·0				424·5	
August 16	17·6	398·45	402·4	415	425·3	449
,, 30	15·0		403·75		425·7	450·6

The scale value appears therefore to have been practically constant throughout the whole period of the observations, and = ·000251 X.

Declinometer.

The declinometer, one on Lamont's principle, having a cylindrical magnet 2·5 in (6 cm.) in length was adjusted by suspending the magnet by a bundle of unspun silk fibres and (after the instrument had been levelled and the torsion removed from the suspension thread) bringing the reflection of the central division of the scale into coincidence with the cross wire of the telescope.

Each division of the scale was = 60″·6, and since of the coefficient of torsion $\frac{H}{F}$ varied from ·00266 to ·0044, the value of one scale division ranged between 60″·76 and 60″·87.

In the reduction of these observations the scale divisions have been taken as minutes; the recorded deviations are therefore too small by about 1·3 per cent.

Once finally adjusted, this instrument, like the bifilar, was left untouched until dismounted on the morning of the 1st September 1883.

Balance Magnetometer.

The instrument for observing the variations of vertical intensity was a Lloyd's balance magnetometer with 12-inch (30 cm.) magnet. It was adjusted by levelling the base slab and bringing the magnet into the plane of the magnetic meridian.

It was soon found that the magnet was largely affected by changes of declination, and required continual re-adjustment to bring it back into the meridian.

The slow oscillation of this long magnet was a frequent source of error in reading off its scale.

The scale value was determined from the times of vibration of the magnet observed both in the vertical and horizontal planes, which were 16 (t^1) and 10 (t) seconds respectively. The value of the ratio $\frac{t^{12}}{t^2}$ was therefore 2·56, and the resulting value of one division of the scale ·0000093 Y.

The variation instruments were read at each hour of local mean time in the order, bifilar, declinometer, balance magnetometer, at one minute before each hour, at the hour, and at one minute past, until the 11th October 1882, but on and after that date the readings were made at two minutes' interval, *i.e.*, at 58m., 0., 2m., as it was found that with only one minute's interval between the reading there was a certain amount of hurry, and consequent liability to error, in recording the observations. The bifilar was read at the exact second, the declinometer 12 seconds later, and the balance magnetometer 40 seconds after each minute, but this latter instrument took more or less time to read according to the distance it was necessary to move the micrometer screw to obtain a correct setting.

On days of disturbance observations were also made at the Göttingen hours in the same manner.

NOTES ON THE REDUCTION OF THE DIFFERENTIAL OR VARIATION OBSERVATIONS; BY G. M. WHIPPLE, B.SC., SUPERINTENDENT OF THE KEW OBSERVATORY.

During the period of observation at Fort Rae all the differential or variation instruments were read three times at each hour, two minutes being allowed to elapse between the consecutive readings, and the mean of the three readings has been accepted throughout as the true value for the hour. This does not, however, obtain on term days when the tri-horary readings were not made, but the actual reading at the instant of the hour was only taken.

The observations were all entered according to local time, care being exercised on term days to correct the readings for difference in time when transcribing them from the term day to the ordinary observation book.

DECLINATION.

The values used in the reductions are given in the following table, one scale division of the declinometer being assumed to be equal to 60″ of arc. (*See* p. 124.)

TABLE 8.

Date.	Scale divisions.	Corresponding Declination.
		° ′
From September 1882 to April 1883	330	40 20 East
From April 15 „	330	40 19
„ May 1 „	330	40 18
„ „ 15 „	330	40 18
„ June 1 „	330	40 17
„ „ 15 „	330	40 10
„ July 1 „	330	40 5
„ „ 15 „	330	40 4
„ August 1 „	330	40 2
„ „ 15 „	330	40 2

From this table other tables were computed, giving the true values in arc of the readings for every tenth scale division from 70 to 790.

Forms having been prepared in accordance with the model adopted by the Vienna Conference, the mean hourly readings were converted into declination values and entered as such in their respective columns, together with the corresponding movement symbols* as determined by the changes occurring in the four minutes during which the instrument was under observation.

---

* ↾ Readings rising by oscillations.
↿ „ falling „
↕ „ rising by jerks.
↨ „ falling

* ↑ Readings rising steadily.
↓ falling „
z stationary.
? Movement uncertain.

The highest and lowest readings noted at any time during the day were then entered as the extreme values for the twenty-four hours, and the differences taken. Hourly, daily, and monthly means were then finally computed.

This set of tables is contained on pp. 130 to 141.

Term Day Observations.

On certain selected days, called term days, a list of which is here given:—

September			15	1882.
October	1	and	15	,,
November	1	,,	15	,,
December	1	,,	15	,,
January	2	,,	15	1883.
February	1	,,	15	,,
March	1	,,	15	,,
April	1	,,	15	,,
May	1	,,	15	,,
June	1	,,	15	,,
July	1	,,	15	,,
August	1	,,	15	,,

readings of the declinometer were made every five minutes from midnight up to 11.55 p.m., Göttingen mean time, with the addition of certain other readings made for one previously selected hour, as given in the following list, during which the instrument was read every 20 seconds.

September			15	1882	3 p.m.	and	4 p.m.,	Göttingen mean time.
October	1	and	15	,,	4 p.m.	,,	5 p.m.	,,
November	1	,,	15	,,	6 p.m.	,,	7 p.m.	,,
December	1	,,	15	,,	8 p.m.	,,	9 p.m.	,,
January	2	,,	15	1883	10 p.m.	,,	11 p.m.	,,
February	1	,,	15	,,	midnight	,,	1 a.m.	,,
March	1	,,	15	,,	2 a.m.	,,	3 a.m.	,,
April	1	,,	15	,,	4 a.m.	,,	5 a.m.	,,
May	1	,,	15	,,	6 a.m.	,,	7 a.m.	,,
June	1	,,	15	,,	8 a.m.	,,	9 a.m.	,,
July	1	,,	15	,,	10 a.m.	,,	11 a.m.	,,
August	1	,,	15	,,	noon	,,	1 p.m.	,,

These observations having been reduced to absolute value and tabulated, form the tables on pp. 166 to 223; they are also represented as plotted in curves forming plates 1 to 28. No calculation of means or differences have been made from them.

HORIZONTAL INTENSITY (BIFILAR MAGNETOMETER).

(*See* p. 123.)

The scale value of this instrument and the temperature corrections of its magnet were determined at Kew, and the latter was also re-examined on its return, but the corrections so found were seen, by a preliminary reduction of the readings, to be very inadequate for the purpose of reducing the observations made when the instrument was fixed *in situ*, and measures were taken to deduce the true corrections from the observations themselves.

The first step in the reductions was to find the mean scale reading for the hour from the three observations, as in the case of the declination.

These values were then extracted for the hours of 11 a.m., noon, and 1 p.m. (being the period of least variation) on such days as the magnets were fairly steady, with the

corresponding observed temperatures ranging from about − 15° to + 25° cent. From these the mean values for every change of 10° was computed, and corrected for change of zero of the instrument.

The observations as corrected by this preliminary determination of the temperature effect were plotted in a curve, and irregular readings being then rejected, a new value was found. In this way a final temperature correction was arbitrarily determined, and the values given below adopted for the reduction of the observations to a common temperature.

TABLE 9.

Temperature. Cent.	Corrections in scale divisions.	Temperature. Cent.	Corrections in scale divisions.
°			
−15	−25	+10°	+11
−10	−16	+15	+14
− 5	− 8	+20	+19
0	0	+25	+23
+ 5	+ 7		

The mean hourly readings having been reduced to temperature 0° by the above table, were converted into absolute values by Table 3, calculated by Capt. Dawson from the Absolute Observations, and additional corrections (Table 2) for change of zero being applied, the results were entered for every hour in abstracts on the forms adopted by the International Polar Commission. They form the tables on pp. 142 to 153 of hourly absolute values of the horizontal intensity, and are accompanied by symbols giving the nature of the movements at the time of observation determined as has already been described in the case of the declination, p. 125.

Similarly daily, hourly, and monthly means have been computed, and the maximum, minimum, and diurnal range calculated.

TERM DAY OBSERVATIONS.

The values of the horizontal intensity have been computed for every five minutes on the term days already referred to, and plotted as curves. (Plates 1–23.)

Term hour observations of this instrument were not made.

VERTICAL INTENSITY (LLOYD'S BALANCE MAGNETOMETER).

The instrumental readings as recorded are those of a micrometer placed opposite the South end of the magnet, and are such that one division represents a change of ·00001 C.G.S. units of force, but on account of the instrumental defects already enumerated, p. 124, the last figure has not been taken into account. The reductions and values are thus only given to ·0001 C.G.S.

The first step in the reductions was to make a preliminary determination of the temperature correction; this was done in the same manner as for the bifilar by ascertaining the change in the scale readings when temperature altered greatly,—but corresponding readings of the other instruments showed a comparative absence of magnetic disturbance,—the value so found was roughly calculated to be ± 6·5 divisions for ± 1° centigrade.

Having constructed a table from this value the hourly readings for each day were reduced to the mean temperature of the day, and the daily means for both scale readings and temperature computed.

Next, the change in readings produced by each re-adjustment of the instrument was estimated both by comparison of readings before and after such re-adjustment, which values

were generally noted in the journal, and also by comparison of daily means for adjacent days at the time of the adjustment. The values finally adopted were as follows :—

TABLE 10.

Corrections for change of zero produced by lifting of the Magnet of the Balance Magnetometer.

Date.	Scale Divisions.	Date	Scale Divisions.	Date.	Scale Divisions.
1882.		1883.		1883.	
October 14	+58	February 23	+ 9	May 22	+15
,, 22	+38	March 2	+18	June 25	− 5
,, 28	+40	,, 8	+ 3	,, 27	+ 4
November 23	+65	,, 16	+18	July 8	+ 2
December 3	+80	,, 20	+12	,, 15	+ 7
,, 14	+30	,, 26	+13	,, 21	+ 8
		,, 31	+ 5	,, 31	+ 5
1883.		April 4	+ 4	August 7	+ 7
January 19	+40	,, 14	+ 5	,, 10	+ 4
,, 22	+10	,, 20	+15	,, 13	+ 2
,, 29	+ 3	,, 28	+11	,, 17	+ 4
February 5	+12	May 2	+14	,, 20	+ 2
,, 20	+40	,, 9	+10	,, 25	+ 2

The assumption was then made that the change in the scale readings was proportional between the different shiftings of the zero and a table drawn up giving a suitable proportionate correction for every day (with the exception of January 5, when the instrument was bodily disarranged, and on May 25th, when the balance of the magnet was entirely altered).

These corrections being applied to the daily means, 5-day averages of both scale readings and temperature were calculated and the results plotted in a curve; measurements were then made from this curve and a final temperature correction of $\pm$ 1° centigrade = $\pm$ 4·5 scale divisions found.

The 5-day means and their corresponding temperatures were then again copied and the new temperature correction applied; another plotting of the second set of 5-day means was then performed and the smoothing of this curve afforded materials for a better estimation of the effects of the re-adjustment of the magnet. Finally a table was drawn up giving corrections to be applied to the daily readings of the magnetometer so as to bring them into one uniform continuous series.

The means of the tri-horary readings were then taken, copied out, reduced to temperature 0°, and corrected for adjustment. The same reductions were also applied to term day readings.

A selection was then made of corrected and reduced scale readings for the times at which absolute determination of the vertical force had been computed by Captain Dawson from his unifilar and dip observations, and from these the following table was prepared for converting scale readings into absolute units.

TABLE. 11.

Scale Divisions.	Vertical Force.	Corresponding Measures in British Units.		
	C.G.S.	Foot.	Grain.	Secs.
50 read off as 500	0·6119		13·271	
100 ,, ,, 1000	0·6147		13·332	
150 ,, ,, 1500	0·6176		13·395	
200 ,, ,, 2000	0·6205		13·457	
250 ,, ,, 2500	0·6233		13·518	

The corrected hourly means having been reduced by this table, the values were entered into the International Schedules with corresponding movement symbols.*

The extreme values and daily range were extracted from these results only, not from the individual observations, as in the case of the other two instruments. Daily, hourly, and monthly averages were then finally computed.

The readings on term days were merely copied into the Schedules after correction and reduction, and plotted as curves. (Plates 1 to 23.)

OBSERVATIONS ON SELECTED DAYS.

In conformity with the decision of the Vienna Conference, the instrumental readings on certain days enumerated by Dr. Wild have been copied out, reduced, and measured, in order to give the undisturbed diurnal variation of the magnetic elements. These observations have been entered according to Göttingen mean time, although they were not made precisely at the Göttingen hours, excepting in the case of term days.

The rule followed throughout has been to enter observations at 1h., 2h., 3h., a.m., &c., Fort Rae mean time as 9h. 23m., 10h. 23m., 11h. 23., a.m., &c., Göttingen mean time.

These observations have been grouped in pairs of months in compliance with Circular No. 39 issued by Dr. Wild, and the final curves of diurnal variation drawn from them. (Plates 29 to 32.)

Table 12 exhibits the average values of the Horizontal, Vertical, and Total intensities as well as the Inclination and Declination at Fort Rae, for the year 1882–83, as derived from the means of these selected days.

TABLE 12.

Units.	Electrical.	Gaussian.	British.
	C.G.S.	Metre. Gramme. Sec.	Foot. Grain. Sec.
	° ′		
Inclination - - - -	82 55·3		
Declination - - - -	40 19·9 E		
Horizontal Intensity (X) - -	0·076688	0·76688	1·6632
Vertical Intensity (Y) - -	0·61760	6·1760	13·395
Total Intensity - -	0·62234	6·2234	13·497

For selected days of disturbance the corresponding values have been extracted from the Schedules and entered to the corresponding Göttingen mean time, including also the reduced additional observations made at Fort Rae when a disturbance was seen to be taking place.

Kew Observatory,
April 4, 1885.

G. M. WHIPPLE.

* *See* p. 125.

September 1882. 36°+ $\phi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2														
3														
4	4 15 z	4 29 ↓	4 31 z	4 33 z	4 40 z	4 28 z	4 44 z	4 13 z	4 46 ↑	4 41 z	4 29 ↑	4 25 z	4 18 z	4 14 z
5	4 21 ↓	4 51 ↓	4 39 ↑	5 14 ↓	4 16 ↓	5 13 z	4 56 z	5 16 ↓	5 37 ↓	4 50 z	4 33 ↓	4 32 z	4 29 ↓	4 28 z
6	4 11 z	4 19 z	4 58 ↓	4 50 z	5 24 z	5 15 ↓	5 40 z	5 31 ↓	4 59 ↓	4 54 ↓	4 47 ↓	4 19 z	4 30 z	4 20 ↓
7	*													
8	*													
9	4 34 ↑	4 29 ↓	4 39 z	4 49 ↑	4 40 z	5 4 z	5 7 ↑	5 0 z	4 42 z	4 49 z	5 1 ↓	4 46 ↓	4 35 z	4 34 z
10	4 29 ↑	4 48 z	4 36 z	4 33 z	4 52 z	4 45 z	5 7 z	5 5 ↑	4 56 z	4 57 z	4 46 z	4 36 z	4 36 z	4 37 z
11	4 22 ↑	4 30 z	4 37 z	4 40 z	4 50 z	4 55 z	4 59 z	5 3 ↑	5 0 z	5 1 z	5 13 ↓	4 21 ↑	5 6 z	4 24 z
12	4 36 z	4 39 z	4 45 ↓	4 47 z	4 49 z	4 45 ↓	5 2 ↓	5 7 ↓	5 3 ↑	5 19 z	4 53 ↓	4 57 ↓	4 33 z	4 29 z
13	5 16 ↓	4 9 ↑	4 39 ↑	4 47 z	4 46 z	5 16 z	5 25 ↑	5 9 ↓	5 5 ↓	4 58 ↑	4 48 ↑	4 28 z	4 43 z	4 41 z
14	4 28 ↑	5 4 z	4 46 ↓	4 43 z	4 45 z	5 3 ↑	5 26 ↑	5 28 ↑	4 48 z	4 33 z	4 38 z	4 47 z	4 31 ↓	4 24 z
15	4 32 ↓	4 44 ↓	4 37 ↑	4 52 ↑	4 58 ↓	4 48 z	4 48 ?	4 44 z	4 42 z	4 44 ↓	4 31 z	4 28 ↓	4 30 z	4 30 z
16	4 32 z	4 32 z	4 34 z	4 34 z	4 35 z	4 39 z	4 44 ↑	4 50 z	4 49 z	4 46 z	4 38 z	4 34 z	4 32 ↑	4 33 z
17	4 27 z	4 30 z	4 32 z	4 36 z	4 49 z	4 57 z	4 44 z	4 46 z	4 51 z	4 43 z	4 40 ↓	4 30 z	4 28 z	4 28 z
18	4 32 z	4 34 z	4 31 z	4 34 z	4 35 z	4 38 ↓	4 51 ↓	5 4 ↑	5 4 ↓	4 56 z	4 50 z	4 23 z	4 19 z	4 18 z
19	4 30 z	4 28 ↑	4 32 z	4 37 z	4 35 z	4 50 ↑	5 7 ↓	5 1 ↑	4 49 z	4 54 z	4 33 z	4 32 z	4 25 z	4 26 z
20	4 40 z	4 28 z	4 30 z	4 35 ↑	4 51 ↑	4 48 ↑	4 51 ↑	4 53 ↓	4 44 z	4 40 z	4 35 z	4 29 z	4 32 z	4 24 z
21	4 32 z	4 38 z	4 44 ↑	4 28 z	4 33 z	4 38 z	4 45 z	4 46 z	4 41 ↓	4 41 z	4 41 ↓	4 24 z	4 26 z	4 26 z
22	4 42 ↑	4 42 ↓	4 35 z	4 34 z	4 40 z	4 45 z	4 47 z	4 44 z	4 46 z	4 45 z	4 40 z	4 30 z	4 29 z	4 29 z
23	4 28 z	4 30 z	4 33 z	4 34 z	4 55 ↓	5 54 z	6 11 ↓	5 55 ↓	4 49 z	4 41 ↓	4 31 z	4 26 z	4 20 z	4 22 z
24	4 28 z	4 30 z	4 31 z	4 33 z	4 44 z	4 43 ↑	4 40 z	4 40 z	4 40 z	4 41 z	4 33 z	4 30 z	4 28 z	4 24 z
25	4 26 ↑	4 57 ↓	4 54 ↓	5 2 ↑	4 42 ↓	4 39 z	5 29 z	5 15 z	5 25 ↑	4 35 ↓	4 40 ↑	4 31 z	4 33 ↓	4 41 ↑
26	3 50 ↑	4 22 ↑	4 47 ↑	4 57 z	4 50 z	4 44 z	4 47 z	4 47 z	4 44 z	4 42 z	4 37 z	4 35 z	4 31 z	4 28 z
27	4 38 z	4 43 ↑	4 44 z	4 46 z	4 54 z	5 1 ↓	4 53 ↑	4 38 z	4 45 z	4 40 z	4 37 z	4 36 z	4 26 z	4 23 z
28	4 39 ↓	4 31 ↑	4 36 z	4 44 z	4 47 z	4 38 z	4 42 z	4 50 z	4 41 z	4 35 z	4 32 z	4 28 z	4 27 z	4 27 z
29	4 32 z	4 48 ↓	5 18 ↑	4 48 ↓	4 49 ↓	5 3 z	4 51 z	4 45 ↓	4 41 z	4 40 z	4 34 z	4 25 z	4 22 z	4 18 z
30	4 16 ↓	4 17 z	4 42 ↓	4 28 z	4 33 z	4 47 z	5 1 ↑	5 4 z	4 42 ↓	4 32 z	4 30 z	4 28 z	4 17 z	4 17 z
Mean -	4 29·4	4 34·9	4 40·4	4 42·3	4 45·3	4 53·4	5 1·5	4 59·0	4 54·0	4 46·3	4 40·4	4 31·2	4 29·9	4 26·6

October 1882. 38°+ $\phi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2	2 8 ↑	2 30 ↓	2 58 ↓	2 20 z	2 16 ?	2 27 ↑	2 40 ↓	2 44 z	2 36 z	2 31 z	2 30 z	2 21 z	2 20 z	2 15 z
3	2 9 ↓	2 1 z	1 36 ↑	2 28 ↑	0 57 ↓	3 28 ↓	3 33 ↓	2 48 z	3 24 ↓	2 15 ↓	[>6 10]	3 12 ?	2 54 ↓	2 44 ↓
4	2 31 z	2 14 ↑	2 25 ↑	2 36 z	2 24 z	2 31 z	2 35 ↓	3 9 ↑	2 44 ↑	2 38 z	2 32 z	2 33 z	2 20 z	2 24 z
5	2 25 ↓	2 59 ↑	2 46 ↓	2 29 ↑	2 48 z	2 32 ↓	2 57 ↓	3 2 ↑	3 31 ↓	2 44 ↓	2 52 ↑	2 25 z	2 20 z	2 19 z
6	2 21 z	2 31 ↓	2 16 z	2 40 z	2 48 z	2 32 ↑	2 42 ↓	3 8 z	3 11 ↑	2 47 ↓	2 58 ↓	3 37 ↑	3 55 ↓	2 46 ↓
7	3 27 ↓	1 52 ↑	2 54 ↓	1 50 ↑	4 32 ↑	3 33 ↑	2 47 z	2 41 z	2 56 ↑	2 49 z	2 15 z	2 13 z	2 23 ↓	2 14 ↓
8	2 24 z	2 25 z	2 30 z	2 31 z	2 28 ↓	2 42 ↓	2 49 z	2 35 ↑	2 42 ↓	2 25 z	2 29 ↑	2 26 z	2 21 z	2 24 z
9	2 22 z	2 23 z	2 30 ↑	2 27 z	2 27 z	2 30 z	2 30 z	2 38 z	2 28 z	2 30 z	2 33 z	2 14 ↓	2 19 z	2 20 z
10	2 23 z	2 26 z	2 25 z	2 46 ↑	2 32 z	2 31 ↓	3 4 z	2 49 z	2 42 z	2 31 ↓	2 28 z	2 41 ↑	2 23 ↓	2 16 ↑
11	2 14 ↓	2 21 z	2 57 z	2 56 z	2 45 ↑	2 57 ↑	2 55 ↑	2 35 ↓	2 58 ↑	2 37 z	3 10 z	2 51 ↓	2 13 ↓	2 18 ↓
12	2 26 ↑	3 12 ↓	2 27 ↑	2 53 ↓	2 52 ↑	2 48 ↑	2 52 ↓	2 32 ↓	2 36 ↓	2 28 ↓	2 16 ↑	2 9 ↑	2 19 ↑	
13	2 17 ↑	2 33 ↓	2 30 z	2 23 z	2 29 ↑	2 26 ↑	2 44 z	2 38 ↓	2 37 ↑	2 32 ↑	2 28 ↓	2 23 z	2 22 z	2 22 ↑
14	2 17 ↑	2 19 ↑	2 22 z	2 25 z	2 28 z	2 33 ↓	2 46 ↑	2 37 ↓	2 54 z	2 32 ↓	2 24 z	2 22 z	2 17 z	2 17 z
15	2 24 z	2 29 z	3 8 ↑	2 46 ↓	2 52 z	2 46 ↓	3 0 ↑	2 58 ↑	3 2 ↑	2 45 ↓	2 44 ↓	2 39 z	2 18 ↑	2 20 ↑
16	2 36 ↓	3 16 ?	2 30 ↑	3 58 ↑	2 54 ↑	4 4 ↓	3 32 ↑	3 25 ↑	3 5 ?	2 42 ↓	2 35 ?	2 19 ?	2 19 z	2 20 ↓
17	2 4 ↑	2 14 ↓	2 6 ↓	2 47 ↓	2 38 z	2 31 z	2 44 ↑	2 51 ↑	2 50 ↓	2 51 ↓	2 41 ↑	2 29 z	2 25 ↓	2 27 z
18	2 54 ↓	2 37 ↑	2 26 z	2 31 z	2 43 z	2 52 z	2 41 ↑	2 42 ↑	2 37 ↑	2 32 ↓	2 42 ↓	2 29 z	2 21 z	2 20 z
19	1 35 ↑	2 31 ↑	2 33 ↑	2 31 z	2 31 z	2 30 ↓	2 31 ↓	2 32 ↑	2 36 z	2 44 ↑	2 33 z	2 29 z	2 25 z	2 24 z
20	2 31 ↓	2 12 ↑	2 26 z	2 30 z	2 40 z	2 44 z	2 42 z	2 51 z	2 47 z	2 32 z	2 29 z	2 25 ↓	2 23 z	2 20 z
21	2 23 z	2 24 z	2 27 z	2 29 z	2 29 z	2 31 z	2 35 z	2 38 z	2 38 z	2 34 z	2 28 z	2 24 z	2 25 z	2 23 z
22	2 26 z	2 28 z	2 28 z	2 30 z	2 30 z	2 34 z	2 31 ↑	2 37 z	2 38 z	2 32 z	2 27 z	2 21 z	2 22 z	2 23 z
23	2 7 ↓	2 19 z	2 33 z	2 58 ↓	2 47 ↑	3 4 ↓	3 10 ↑	2 56 ↑	3 4 ↓	2 59 ↓	2 24 ↑	2 38 ↑	2 39 ↓	2 31 ↑
24	1 50 ↓	3 3 ↑	3 2 z	2 44 z	3 5 z	2 57 ↓	2 31 ↑	2 41 ↑	2 35 ↓	2 30 z	2 24 z	2 25 z	2 27 z	2 24 z
25	2 24 ↓	2 7 ↓	2 32 ↑	2 59 ↓	3 13 ↑	2 50 z	2 50 z	2 58 ↑	2 46 z	2 33 z	2 29 ↓	2 22 z	2 21 ↓	2 22 z
26	2 12 ↓	2 29 ↓	2 50 ↑	3 38 ↓	3 43 ↓	2 52 ↓	2 45 ↑	2 50 ↓	2 35 ↓	2 40 ↑	2 24 ↑	2 31 z	2 22 z	2 19 ↑
27	2 19 ↓	2 23 z	2 33 z	2 32 z	2 50 z	2 45 z	2 53 z	2 51 ↑	2 48 ↓	2 29 ↓	2 25 ↑	2 29 ↓	2 22 z	2 20 ↑
28	2 20 z	2 27 z	2 47 ↑	2 44 ↓	2 36 z	2 38 z	2 40 ↑	2 43 z	2 39 z	2 48 ↓	2 15 ↓	2 28 ↑	2 31 z	2 27 ↓
29	2 29 ↑	2 29 z	2 24 z	2 35 z	3 3 ↓	4 0 ↓	3 43 ↓	3 18 ↑	3 3 ↑	2 29 ↑	2 31 ↓	2 19 ↑	2 27 ↓	2 4 ↑
30	2 20 ↑	2 29 ↑	3 21 ↑	2 49 ↓	2 40 ↑	2 37 ?	2 48 ↑	2 46 z	2 41 ↓	2 40 z	2 55 ↓	2 28 ↓	2 22 z	2 26 ↑
31	2 32 ↑	3 14 ↓	2 46 ↑	2 49 ↓	2 52 ↑	2 47 z	3 7 z	2 38 ↑	2 40 ↑	2 46 z	2 39 ↑	2 29 ↓	2 27 ↑	2 26 ↑
32	2 29 ↓	1 56 ↓	2 40 ↓	2 31 z	2 38 z	2 32 z	2 34 z	2 37 z	2 44 ↓	2 34 z	2 34 ↑	? 33 z	2 27 z	2 26 z
Mean -	2 21·5	2 27·3	2 36·5	2 38·0	2 42·9	2 52·6	2 51·8	2 48·6	2 48·5	2 36·8	2 33·5	2 30·7	2 26·4	2 22·6

* For the greater part of these two days the mirror attached to the magnet just grazed the bottom of the box, the suspension thread having stretched.

$\lambda = -115° 43' 50''$ W. $= -$ 7h. 42m. 55s. Local Mean Time. *September* 1882.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
4 22 ↓	4 28 z	4 13 ↓	4 19 z	4 21 z	4 43 ↑	4 23 z	4 19 z	4 14 z	4 22 ↑	4 26·3	4 48	4 12	0 36
4 34 ↑	4 16 z	4 26 z	4 21 ↑	4 23 z	4 18 z	4 53 ↑	4 56 ↑	4 20 ↓	4 27 z	4 40·4	5 43	3 24	2 19
4 20 z	4 26 z	4 33 z	4 28 z	4 22 z	4 19 z	4 14 z	4 11 z	4 12 z	4 11 z	4 38·0	5 40	4 10	1 30
4 27 z	4 19 z	4 23 z	4 31 ↑	4 32 z	4 33 z	4 34 z	4 33 z	4 32 z	4 32 z	4 39·4	5 7	4 10	0 57
4 37 ↓	4 35 z	4 31 z	4 34 z	4 21 z	4 31 ↓	4 19 z	4 33 ↓	4 15 ↑	4 40 ↓	4 39·1	5 8	4 9	0 59
4 23 ↓	4 29 ↓	4 30 z	4 24 ↓	3 45 ↓	6 39 ↓	4 18 ↓	4 19 ↑	4 37 z	4 20 z	4 41·9	6 41	3 40	3 1
4 23 z	4 40 z	4 22 z	4 33 ↓	4 19 z	4 42 z	4 33 ↓	4 22 ↓	3 54 ↑	3 17 ↑	4 37·0	5 20	1 59	3 21
4 37 z	4 30 z	4 35 z	4 26 z	4 25 ↓	4 29 z	4 46 ↑	4 26 z	4 35 ↓	4 27 ↑	4 43·6	5 25	4 6	1 19
4 23 z	4 18 ?	4 25 ↑	4 28 ?	4 21 ↑	4 30 ↑	5 11 ↓	5 9 ↓	4 48 ↑	3 57 ↓	4 42·3	5 35	3 57	1 38
4 30 ↓	4 31 z	4 27 z	4 32 z	4 34 z	4 30 z	4 34 z	4 30 z	4 29 z	4 31 z	4 36·5	4 58	4 24	0 34
4 26 z	4 32 z	4 25 z	4 31 z	4 25 z	4 23 z	4 29 z	4 37 ↑	4 30 ↓	3 54 z	4 32·7	4 50	3 53	0 57
4 28 z	4 25 ↓	4 19 z	4 26 z	4 30 z	4 32 z	4 30 z	4 30 z	4 32 z	4 31 z	4 34·3	4 58	4 18	0 40
4 14 z	4 30 z	4 32 z	4 32 z	4 30 z	4 32 z	4 30 z	4 31 z	4 31 z	4 32 z	4 35·1	5 6	4 14	0 52
4 21 z	4 30 z	4 28 z	4 26 z	4 24 z	4 21 z	4 20 ↑	4 26 ↑	4 24 ↓	4 24 z	4 33·4	5 8	4 17	0 51
4 26 z	4 16 z	4 13 z	4 27 z	4 21 ↓	4 27 z	4 25 z	4 28 z	4 30 z	4 27 z	4 32·5	4 53	4 12	0 41
4 27 z	4 27 z	4 28 z	4 30 z	4 31 z	4 30 z	4 30 z	4 30 z	4 27 z	4 22 z	4 32·7	4 47	4 21	0 26
4 32 z	4 31 z	4 24 z	4 25 z	4 24 z	4 26 ↓	4 22 ↓	4 15 ↑	4 30 z	4 26 z	4 33·4	4 49	4 14	0 35
4 29 z	4 30 z	4 30 z	4 31 z	4 28 z	4 30 z	4 28 z	4 26 z	4 29 z	4 28 z	4 42·4	6 22	4 20	2 2
4 26 z	4 29 z	4 24 z	4 18 z	4 20 ↑	4 53 ↓	3 45 ↓	3 27 z	4 9 ↓	3 40 ↑	4 24·8	4 58	3 26	1 32
4 24 ↓	4 31 z	4 20 z	4 24 ↑	4 30 z	4 21 z	4 40 ↑	4 26 ↓	4 23 ↓	4 58 ↓	4 41·9	5 30	3 20	2 10
4 29 z	4 20 z	4 21 z	4 18 z	4 23 z	4 38 ↑	4 8 ↓	2 58 ↑	4 15 ↓	4 14 ↑	4 26·9	4 57	2 18	2 39
4 23 z	4 25 z	4 25 z	4 28 z	4 26 z	4 24 z	4 26 z	4 30 z	4 22 z	5 22 ↑	4 37·3	5 34	4 22	1 12
4 26 z	4 23 z	4 27 z	4 30 z	4 28 z	4 25 z	4 28 z	4 26 ↓	4 30 ↑	4 31 z	4 32·9	4 50	4 23	0 27
4 16 z	4 18 z	4 20 z	4 20 z	4 18 z	4 19 z	4 17 z	4 16 z	4 28 z	4 9 z	4 32·3	5 19	4 9	1 10
4 14 z	4 18 z	4 19 z	4 17 z	4 17 z	4 16 z	4 18 ↑	4 19 z	4 21 ↓	4 21 ↑	4 27·3	5 5	4 14	0 51
4 25·5	4 26·3	4 24·8	4 26·4	4 23·1	4 34·0	4 26·8	4 22·5	4 24·7	4 21·7	40 35·5	42 41	37 59	4 42

$\lambda = -115° 43' 50''$ W. $= -$ 7h. 42m. 55s. *October* 1882.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 17 ?	2 16 z	2 17 z	2 18 z	2 10 z	2 16 z	2 16 ↓	2 10 z	2 16 ↑	1 40 ↑	2 21·3	3 1	1 33	1 28
2 10 ↑	2 13 ↓	2 19 ↑	2 18 ↓	2 17 z	1 57 ↓	3 34 ↑	2 0 ↑	2 18 z	2 19 z	2 28·4	3 52	0 46	3 6
2 28 ↑	2 23 ↓	2 20 z	2 17 z	2 19 z	2 12 z	2 21 z	1 55 ↓	2 24 z	2 4 ↓	2 25·8	3 11	1 52	1 19
2 26 ↓	2 22 z	2 24 z	2 24 z	2 20 z	2 16 z	2 8 z	2 20 z	2 14 ↓	2 20 ↑	2 33·4	3 50	1 46	2 4
2 17 ↑	2 14 ↑	2 13 ↑	2 13 z	2 3 ↑	1 28 ↓	1 48 ↑	1 31 ↑	1 51 z	5 4 ↓	2 37·3	5 20	1 24	3 56
2 20 z	2 19 z	2 20 z	2 21 z	2 22 z	2 24 z	2 23 z	2 24 z	2 24 z	2 22 z	2 35·2	4 37	1 30	3 7
2 28 z	2 18 z	2 26 z	2 24 z	2 20 z	2 21 z	2 22 z	2 20 z	2 23 z	2 22 z	2 27·3	2 50	2 17	0 33
2 20 ↑	2 9 z	2 26 z	2 22 z	2 18 z	2 19 z	2 22 ↑	2 20 z	2 23 z	2 21 z	2 23·8	2 38	2 8	0 30
1 52 ↑	2 0 ↓	2 5 z	2 7 z	2 20 ↑	2 17 z	2 12 z	2 19 z	2 20 ↑	2 13 ↓	2 24·3	3 4	1 48	1 16
2 15 ↑	2 24 z	2 9 z	2 18 z	2 18 z	2 35 z	2 20 z	2 2 ↑	2 2 ↑	2 12 z	2 30·9	3 12	2 0	1 12
2 12 z	2 19 z	2 19 z	2 13 ↑	2 24 ↓	2 18 z	2 13 z	2 24 ↓	2 26 ↑	2 8 ↑	2 27·5	3 14	2 5	1 9
2 17 z	2 23 z	2 24 z	2 17 z	2 22 z	2 22 z	2 23 ↑	2 23 ↑	2 18 ↓	1 51 ↑	2 24·3	2 45	1 46	0 59
2 20 z	2 22 z	2 24 z	2 21 z	2 20 z	2 20 z	2 19 z	2 18 z	2 24 z	2 23 z	2 25·2	2 54	2 15	0 39
2 11 ↓	2 20 ↓	2 12 ↑	2 15 ?	2 39 ↓	2 28 ↑	2 23 ↓	2 26 ↑	2 26 ↑	3 28 ↓	2 37·5	3 38	2 2	1 36
2 21 z	2 21 ↑	2 23 z	2 12 ↓	2 22 z	2 24 z	2 24 z	2 14 z	2 31 ↑	2 46 ↑	2 43·9	4 4	2 10	1 54
2 2 ↓	2 15 ↓	2 19 z	2 27 ↑	2 9 ↑	2 4 ↑	2 0 ↑	2 33 ↑	0 36 ↑	2 18 ↓	2 20·9	3 2	0 28	2 34
2 16 ↓	2 15 z	2 13 z	2 27 z	2 13 z	2 22 z	2 24 z	2 18 z	2 22 ↓	4 43 ↑	2 35·0	4 54	2 11	2 43
2 22 z	2 22 z	2 22 z	2 22 z	2 22 z	2 22 z	2 26 z	2 25 z	2 20 z	2 22 z	2 25·4	2 47	1 30	1 17
2 21 z	2 21 z	2 24 z	2 24 z	2 25 z	2 24 z	2 24 z	2 24 z	2 24 z	2 23 z	2 28·6	2 52	2 8	0 44
2 23 z	2 23 z	2 23 z	2 22 z	2 22 z	2 23 z	2 24 z	2 24 z	2 26 z	2 25 z	2 26·8	2 39	2 22	0 17
2 24 z	2 22 z	2 21 z	2 20 z	2 21 z	2 20 z	2 21 z	2 44 ↑	2 15 ↑	2 0 ↑	2 25·6	3 10	1 52	1 18
2 4 z	2 17 ↓	2 12 ↓	1 55 z	2 17 ↑	2 15 z	2 15 z	2 23 ↑	2 50 ↑	1 54 ↓	2 31·3	3 15	1 48	1 27
2 24 ↑	2 24 z	2 23 z	2 23 z	2 22 z	2 5 z	2 18 ↓	2 38 ↑	1 23 ↑	2 18 z	2 28·2	3 23	1 20	2 3
2 19 ↓	2 20 z	2 19 ↓	2 23 z	2 26 z	2 32 z	2 8 z	1 7 ↑	2 4 ↓	2 13 ↑	2 26·6	3 16	0 48	2 28
2 29 ↑	2 25 z	2 26 z	2 22 z	2 31 z	2 27 z	2 32 ↓	1 53 ↑	3 23 ↓	2 6 z	2 34·3	3 46	1 50	1 56
2 21 ↓	2 21 ↓	2 21 z	2 21 z	2 23 z	2 28 z	2 25 ↓	2 19 z	1 43 ↑	2 14 ↓	2 27·3	2 54	0 19	2 35
2 20 z	2 12 ↑	2 20 ↓	2 35 ↑	2 21 ↑	1 41 ↑	2 59 ?	2 2 ↑	2 3 ↑	2 20 ?	2 27·3	3 6	1 26	1 40
2 29 ↓	2 27 z	2 24 ↑	2 26 ↑	2 23 z	2 22 z	4 30 ↓	2 26 ↓	2 47 ↑	2 12 ↑	2 43·3	5 5	2 1	3 4
2 17 ↑	2 15 ↑	2 20 ↑	2 21 ↑	2 27 z	2 25 z	2 27 z	2 25 ↓	2 26 ↓	2 25 ↓	2 32·9	3 30	1 20	2 10
2 24 z	2 26 ↓	2 25 z	2 26 z	2 24 z	2 34 z	2 26 z	2 26 z	2 29 z	2 24 ↓	2 36·5	3 28	1 24	2 4
2 25 z	2 25 z	2 24 ?	2 26 z	2 28 ↓	2 22 ↓	2 25 z	2 24 ↑	2 27 ↑	2 40 ↑	2 29·2	2 51	1 47	1 4
2 18·5	2 19·1	2 19·9	2 19·3	2 20·9	2 17·5	2 26·8	2 15·4	2 16·4	2 28·1	40 29·9	43 20	38 19	5 1

November 1882. 37°+ $\Phi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	° ′ 3 30 ↕	° ′ 3 30 ↓	° ′ 3 42 ↕	° ′ 3 38 ↓	° ′ 3 36 ↓	° ′ 3 48 ↓	° ′ 4 50 ↓	° ′ 4 10 ↓	° ′ 3 40 z	° ′ 3 38 ↓	° ′ 3 27 ↓	° ′ 3 14 ↑	° ′ 3 16 z	° ′ 3 20 ↓
2	3 23 z	3 22 z	3 34 ↓	4 5 ↓	3 14 z	3 30 ↕	3 31 ↓	3 32 ↓	3 35 ↓	3 34 ↓	3 36 ↓	3 26 ↕	3 23 ↕	3 22 ↑
3	3 25 z	3 16 ↕	3 19 ↕	3 31 ↕	4 1 z	4 4 ↕	3 45 ↓	3 33 z	3 38 ↑	3 32 ↑	3 33 ↑	3 25 ↕	3 26 z	3 24 z
4	3 21 ↓	3 26 ↓	3 36 z	3 34 z	3 37 z	3 37 z	3 37 z	3 39 z	3 43 z	3 36 ?	3 36 z	3 31 z	3 28 z	3 29 z
5	3 21 z	3 23 ↑	3 32 z	3 33 z	3 30 z	3 31 z	3 36 z	3 39 z	3 37 z	3 35 z	3 29 ↑	3 46 z	3 14 ↓	3 33 ↑
6	3 24 z	3 30 z	3 33 z	3 30 ↓	3 37 z	3 34 ?	3 38 z	3 36 ↕	3 51 ↑	3 38 ↓	3 26 ↑	3 21 z	3 29 ↑	3 25 z
7	3 20 ↑	3 31 ↓	3 27 z	3 41 z	3 31 z	4 13 ↓	4 15 ↑	5 11 ↑	4 57 ↑	4 36 ?	3 43 ↕	3 33 ↕	3 19 ↑	3 20 z
8	3 35 ?	3 39 z	3 53 ↓	3 49 z	3 57 ↑	4 3 ↕	3 56 ↓	3 45 ↓	3 45 ↓	3 37 z	3 34 ↓	3 28 ↑	3 23 z	3 20 z
9	3 16 ↓	3 30 ?	4 17 ↓	3 56 ↓	4 20 ↓	4 50 ↕	4 31 ↓	4 18 ↓	4 8 ↓	4 24 ↕	4 25 z	3 26 ↑	3 27 ↓	3 19 ↑
10	3 27 z	3 25 z	3 33 z	3 34 z	3 35 z	3 42 z	3 46 z	3 36 ?	3 37 z	3 32 z	3 29 z	3 30 z	3 29 z	3 25 ↑
11	3 29 z	3 28 z	3 28 z	3 29 z	3 35 z	3 37 ↑	3 35 z	3 36 ↕	3 37 ↓	3 37 z	3 30 ↕	3 30 z	3 33 z	3 17 ↓
12	3 1 z	4 18 ↕	3 11 ↑	4 5 ↑	5 41 ↑	5 57 ↕	3 54 ↕	4 11 ↑	4 19 ↕	3 38 ↓	3 34 ?	3 28 ↑	3 10 ↕	3 18 ↕
13	4 0 ↕	2 22 ↓	6 7 ↕	4 13 ↑	5 50 ↕	4 10 ↕	3 49 ?	5 41 ↕	6 12 ↑	5 33 ↓	4 33 z	3 43 ↕	3 29 ↓	3 48 ↓
14	3 41 ↕	3 8 ↑	4 13 z	3 51 z	3 23 ↕	4 5 ↕	5 26 ↕	5 56 ↑	5 16 ↕	5 54 ↕	4 34 ↓	3 45 ↕	3 18 ↕	3 50 ?
15	0 20 ↑	2 55 ↕	3 35 ↕	4 2 ↓	3 36 ↕	4 27 ↓	4 9 ↑	3 56 ↕	4 14 ↑	4 25 ↕	3 38 ↕	3 29 ↓	3 18 ↑	3 13 ↓
16	2 5 ↑	2 28 z	3 49 ↕	2 55 ?	3 22 ↑	3 31 ↕	3 41 ?	3 39 ↕	3 30 ?	3 30 ↕	5 19 z	3 23 ↑	3 27 ?	3 23 ↓
17	3 11 ?	4 7 ↑	0 12 ↕	0 13 ↕	4 36 ↕	2 21 ↓	3 43 ↓	4 47 ↑	3 30 ↕	7 50*	7 7 ↕	4 17 ↕	4 46 ↓	3 17 ↑
18	4 29 ↓	5 47 ↕	4 20 ↓	2 33 ↕	3 29 ↓	3 21 ↕	4 15 ↕	3 52 ↕	4 19 ↓	3 37 ↕	4 43 ↓	4 0 ↕	3 29 ↕	4 38 ?
19	2 36 ↑	2 44 ↕	3 30 ↓	4 53 ↕	5 4 ?	7 17 ↕	3 5 ↑	5 30 ↑	4 31 ↑	4 18 ↓	3 42 ↕	3 34 ↓	3 23 ↕	3 25 ↕
20	[>7 10]	1 37 ↕	5 30 ↕	4 7 ↕	4 51 z	3 24 ↑	4 25 ↓	3 38 ↑	4 10 ↕	4 6 ↕	4 37 ↓	4 33 ?	3 57 ↑	3 23 ↕
21	3 10 ↑	3 23 z	2 26 z	3 36 ↑	3 50 ↑	4 12 ↓	3 33 ↕	5 10 ↕	5 12 ?	4 57 ↓	4 43 ?	4 59 z	4 27 z	4 9 ↑
22	3 9 ↓	3 24 ↑	3 42 z	3 42 ↑	3 32 ?	3 28 z	3 30 ↕	3 31 ↓	3 37 ↑	3 34 ↕	3 24 ↓	3 23 ↓	3 25 ↓	3 25 z
23	3 38 ?	3 13 ↕	3 42 ↕	3 25 ↑	4 18 ↓	4 19 ↕	4 4 ↕	3 56 ↕	3 42 ?	3 17 z	3 11 ↑	3 24 ↓	3 20 z	3 18 z
24	3 5 ?	2 40 ↓	3 31 ↑	3 23 z	3 38 z	3 45 ↕	3 41 ?	3 50 ↕	3 35 ?	3 22 ↕	3 36 z	3 21 ↓	3 20 z	3 24 z
25	3 1 ↕	3 28 ↓	3 20 z	3 34 z	4 14 ↓	5 8 ?	4 41 ?	4 55 ↑	4 57 ↑	3 42 ↕	5 11 ↕	3 28 ↓	3 16 z	3 23 ↑
26	3 20 z	3 22 z	3 21 z	3 31 z	3 52 z	4 13 ↑	4 23 ↕	4 43 ↕	3 53 ↕	3 34 ↕	3 32 ↕	3 36 ↓	3 25 ?	3 6 ↕
27	2 54 ↕	3 10 ↕	3 42 ?	3 43 ?	3 31 ↕	3 37 z	3 35 z	3 51 ?	3 33 ↑	3 29 ?	3 25 z	3 22 z	3 20 z	3 10 ↕
28	3 25 ↓	3 36 ↕	3 38 ↓	3 37 ?	3 39 ↕	4 3 z	3 35 ↕	3 27 ?	3 33 ↕	3 39 z	3 29 z	3 20 z	3 21 z	3 17 z
29	3 17 z	3 22 z	3 24 z	3 25 z	3 30 ↓	3 26 z	3 26 z	3 26 z	3 26 z	3 27 z	3 26 z	3 22 ↓	3 20 z	3 19 z
30	2 51 ↕	3 13 ?	2 49 ↓	3 18 z	3 46 z	3 49 ↓	4 10 ↓	3 41 ↓	3 37 ↑	3 24 ?	3 22 ↕	3 17 ↕	3 25 z	3 16 z
Mean	3 11·9	3 20·6	3 35·9	3 32·9	3 56·5	4 2·1	3 56·2	4 8·5	4 2·5	4 1·2	3 53·8	3 35·8	3 28·8	3 26·5

December 1882. 38°+ $\Phi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	° ′ 2 16 ↕	° ′ 2 18 ?	° ′ 2 21 ↓	° ′ 2 28 ↑	° ′ 2 42 ↕	° ′ 3 14 ↓	° ′ 2 50 ↕	° ′ 2 39 ↕	° ′ 2 33 ↕	° ′ 2 27 ↓	° ′ 2 26 ↑	° ′ 2 24 ↑	° ′ 2 26 z	° ′ 2 23 z
2	2 22 z	2 22 z	2 21 z	2 21 z	2 29 z	2 26 ↕	2 32 z	2 34 ↕	2 31 ?	2 38 ↕	2 25 ↕	2 22 ↓	2 20 z	2 18 ↓
3	2 14 z	2 21 z	2 27 z	2 24 z	2 27 z	2 30 z	2 32 ↕	2 31 ↕	2 32 ↓	2 34 ↕	2 33 ↕	2 13 ↑	2 17 z	2 23 ↓
4	2 37 ↕	2 17 ↓	2 5 ↕	2 39 ↕	2 50 z	3 2 ?	2 18 ↕	2 56 ?	3 52 ↕	2 27 ↕	2 11 ↑	2 5 ↑	2 19 z	2 15 ↓
5	2 6 ↕	2 11 z	2 24 z	2 31 z	2 28 z	2 27 z	2 31 ?	2 27 z	2 23 z	2 22 z	2 20 z	2 19 z	2 18 ↕	2 10 z
6	2 31 ↓	2 25 ↓	2 18 z	2 23 z	2 22 ?	2 26 ↕	2 25 z	2 21 ↕	2 27 ?	2 21 ↓	2 31 ↓	2 22 z	2 20 z	2 19 z
7	2 18 z	2 18 z	2 21 z	2 23 z	2 23 z	2 27 z	2 42 ?	2 26 ↕	2 37 z	2 25 z	2 24 ↓	2 23 ?	2 15 ?	2 9 z
8	2 20 z	2 20 z	2 19 z	2 22 z	2 34 z	2 25 z	2 23 z	2 22 z	2 22 z	2 23 z	2 21 ↓	2 17 ↑	2 19 z	2 17 z
9	2 19 z	2 13 z	2 23 z	2 23 z	2 30 ↑	2 27 z	2 36 z	2 48 ?	3 8 ↑	2 54 z	2 34 z	2 9 ↑	2 10 ↕	2 11 ↑
10	2 7 ↕	2 12 ↑	2 19 z	2 28 ↑	2 33 z	2 21 z	2 18 ?	2 20 z	2 22 z	2 27 ↕	2 20 ↓	2 17 z	2 17 ↕	2 16 z
11	2 18 z	2 31 ↕	2 26 z	2 51 z	2 52 ↓	2 27 ?	2 43 ↕	2 29 ↑	2 55 ↕	2 18 ↑	2 20 ↑	2 19 ↓	2 19 ↓	1 59 ↕
12	2 15 z	2 18 ↑	2 25 ↕	3 3 z	2 13 ↓	2 25 z	2 35 ↕	2 46 ↕	2 57 ↕	2 32 ↕	2 21 ↕	2 12 ↓	2 13 ↕	2 16 ?
13	1 57 ?	2 16 z	2 19 z	2 30 z	2 37 z	2 21 z	2 27 z	2 23 z	2 26 ?	2 26 z	2 21 z	2 20 z	2 16 z	2 14 z
14	2 16 z	2 21 z	2 19 z	2 23 z	2 25 z	2 35 z	2 28 ?	2 21 z	2 25 z	2 23 z	2 20 z	2 17 z	2 16 z	2 14 z
15	2 19 z	2 20 ↓	2 20 z	2 28 ↑	2 26 ↑	2 31 ↓	2 26 z	2 31 ↕	2 38 ↕	2 28 ↕	2 20 ↓	2 24 z	2 34 ↓	2 0 ↕
16	0 37 z	1 48 ↕	1 53 ↓	1 32 ↓	2 52 ?	2 17 ↓	2 30 ?	3 1 ↓	3 22 ↕	2 40 ↑	2 16 ?	2 38 z	2 5 ↑	2 9 ?
17	2 16 z	2 23 z	2 29 ↑	2 26 ↕	2 30 ↓	2 36 ↕	2 24 ↕	2 27 ↑	2 26 ?	2 23 ↑	2 27 z	2 20 z	2 22 ?	2 19 z
18	2 19 z	2 18 z	2 21 z	2 21 z	2 23 z	2 21 z	2 22 z	2 26 ↓	2 25 z	2 24 ↓	2 25 ↓	2 20 z	2 20 z	2 27 z
19	2 56 ↕	2 30 ↓	2 39 ↕	2 31 z	2 16 ?	2 23 z	2 29 z	2 23 z	2 23 z	2 25 ↓	2 24 z	2 21 ↓	2 23 z	2 20 ?
20	2 35 ↕	2 38 ↕	2 35 z	2 44 ↑	2 56 z	3 29 ↑	4 0 ↓	3 56 ↕	2 51 ↕	2 24 ↓	2 41 ↕	1 50 ↓	2 11 ↑	2 34 ↓
21	1 49 z	3 45 ↕	3 12 ↕	2 23 ↑	2 45 z	3 42 ↕	3 35 ↓	3 10 ↕	2 30 ?	2 53 ↕	2 32 ↕	2 21 ↕	2 8 ↑	2 17 ↑
22	1 10 ↕	2 28 ?	2 19 ↕	2 42 z	3 3 ↑	3 8 ↕	2 54 ↑	2 35 ↓	2 46 ?	2 18 ↕	2 19 ↕	2 18 ↓	2 19 z	2 18 ↓
23	1 46 ?	2 7 ↑	1 57 ↕	3 13 ↓	2 8 ↕	2 38 ?	3 8 ↕	2 38 ↑	2 37 ↕	2 17 ↕	2 16 ?	2 14 z	2 17 z	2 11 z
24	2 11 ↕	0 59 ↕	2 51 ↓	2 28 ↓	2 33 ↓	3 14 z	3 28 ↕	3 50 ↕	2 57 ?	2 20 ↕	2 21 ?	2 10 ↑	2 16 z	2 19 z
25	2 16 ?	1 27 ↕	2 27 ↑	2 48 ?	2 43 z	2 41 ?	2 24 ?	2 29 ?	2 25 z	2 22 ↑	2 18 ↑	2 16 z	2 15 z	2 20 z
26	2 20 ↑	2 32 ↕	2 22 z	2 39 z	2 31 z	2 32 ↓	2 41 z	2 34 ↕	2 27 z	2 21 ↕	2 25 ↓	2 17 ?	2 11 ?	2 11 ?
27	2 18 ?	2 10 z	2 16 z	2 21 z	2 20 z	2 24 z	2 25 z	2 27 ↓	2 24 z	2 24 z	2 22 z	2 24 z	2 19 ↕	2 19 z
28	1 57 ?	2 10 z	2 30 z	2 34 ↕	2 56 ↓	2 48 z	2 14 z	2 20 ↓	2 25 ↑	2 25 ?	2 19 ↕	2 20 z	2 20 z	2 14 z
29	1 57 ↓	1 34 ↓	2 13 ↓	3 57 ↕	2 51 z	2 39 ↕	3 13 ↕	2 44 ↓	2 50 ↕	2 31 ↕	2 17 ?	2 14 ?	2 8 ↓	2 8 ?
30	2 10 z	2 16 z	2 30 z	2 34 z	3 4 z	2 56 ↑	2 35 ↑	2 29 z	2 41 ?	2 51 ↑	2 43 ↕	2 12 ?	2 8 ↕	2 14 z
31	1 59 ?	2 5 ?	2 20 ↑	2 50 ?	3 21 z	2 41 ?	2 43 ↕	2 47 ↕	2 32 ↑	2 36 ↕	2 21 ↕	2 11 z	2 13 ↑	2 3 ↓
Mean	2 9·4	2 15·3	2 23·3	2 34·2	2 36·9	2 39·8	2 40·4	2 39·0	2 39·0	2 28·4	2 23·6	2 17·1	2 16·6	2 15·1

* Approximate.

$\lambda = -115° 43' 50''$ W. $= -7$h. 42m. 55s. Local Mean Time. *November* 1882.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
3 20 ?	3 19 z	3 23 z	3 25 z	3 20 ↑	3 22 z	3 22 z	3 21 z	3 18 z	3 19 z	3 32·0	4 50	3 14	1 36
3 22 ↑	3 24 z	3 13 ↓	3 10 ↓	3 12 ↕	3 5 ↕	3 6 ↓	3 20 ↕	3 19 z	3 30 z	3 24·5	4 6	2 58	1 8
3 25 z	3 25 z	3 27 z	3 23 z	3 34 ↕	3 26 z	3 25 z	3 28 z	3 26 ↓	3 28 ↕	3 30·8	4 12	3 13	0 59
3 28 z	3 28 z	3 27 z	3 28 z	3 28 z	3 28 z	3 27 z	3 27 z	3 16 ↓	3 18 ↓	3 30·2	3 44	3 14	0 30
3 15 ↑	3 28 ↑	3 10 ↕	3 13 z	3 23 z	3 18 z	3 29 ↑	3 23 z	3 34 ↕	3 22 z	3 27·2	3 47	3 7	0 40
3 26 z	3 20 ↓	3 26 z	3 25 z	3 27 z	3 28 z	3 22 z	3 24 ↓	3 51 ↑	3 42 ↓	3 31·0	3 56	3 18	0 38
3 17 z	3 22 ↓	3 24 z	3 23 ↓	3 26 z	3 30 z	3 21 z	3 30 ↑	3 7 ↓	3 9 ↓	3 40·2	5 38	2 58	2 40
3 20 z	3 19 z	3 20 ↑	3 28 z	3 23 z	3 20 z	3 20 z	3 14 ↓	3 22 z	3 23 ↕	3 33·0	4 6	2 49	1 17
3 12 ↓	3 16 ?	3 28 z	3 28 ↑	3 24 ↑	3 28 z	3 20 z	3 28 z	3 26 z	3 26 z	3 45·1	4 55	3 10	1 45
3 24 z	3 28 z	3 22 z	3 22 z	3 29 z	3 28 z	3 28 z	3 28 z	3 28 z	3 28 z	3 30·2	3 47	**3 21**	**0 26**
3 18 ↑	3 24 ↑	3 25 ↓	3 20 z	3 22 ?	3 29 z	3 19 z	3 7 z	5 50 ↕	4 2 ↑	3 34·9	6 4	3 6	2 58
3 20 ?	3 24 ↑	3 21 ?	3 1 ↑	2 26 ↓	2 10 ↑	3 9 ↕	3 1 ↓	3 27 ?	3 6 ↕	3 35·4	6 52	2 7	4 45
3 53 ↕	3 27 ↓	3 24 ?	3 19 ↑	3 20 z	3 2 z	4 1 ↓	3 30 z	3 29 ↑	3 31 ↑	**4 6·1**	6 48	2 15	4 33
3 39 ↕	3 47 ↕	3 42 ↓	3 42 ↓	3 51 ↕	1 51 ↕	2 26 ↑	4 20 ↕	2 46 ↑	3 16 ↕	3 56·2	7 0	1 51	5 9
3 34 ↓	3 18 ?	3 18 ?	3 15 ?	3 15 ↓	3 15 z	3 16 ↓	3 18 z	3 16 z	2 52 ↓	3 24·8	4 27	0 20	4 7
3 21 ↕	3 15 ↕	3 10 ↓	3 24 ↑	3 15 z	3 28 ↕	3 15 ↕	3 17 ?	3 24 ↓	3 7 ↓	**3 17·4**	3 57	1 56	2 1
4 4 ?	3 52 ↕	4 37 ↓	3 54 ↕	0 56 ↓	3 4 ↓	3 36 ↑	2 45 ↕	3 15 ↑	3 22 ↓	3 38·4	8 13	**−2 7**	10 20
4 11 ↓	3 39 ?	3 17 ↓	3 12 ↓	3 58 ↓	4 30 ↕	2 58 ?	3 38 ↑	3 41 ↓	3 33 ↑	3 53·7	6 20	1 54	4 26
3 20 ↕	3 32 ↓	4 17 ↕	4 14 ↓	4 35 ↓	3 21 ↕	2 56 ↓	3 16 ↕	3 49 ↕	2 31 ↓	3 53·4	8 40	−1 5	9 45
3 39 ↕	3 21 ?	3 19 ↑	3 14 ↕	3 46 ↕	3 42 ↕	3 19 ↓	3 47 ↑	2 36 ↕	2 29 ↕	3 43·0	**11 35***	0 10	**11 25**
3 9 ↕	3 31 z	3 33 ↕	3 26 ?	3 28 z	3 21 z	3 20 z	3 25 ↓	1 33 ↑	2 26 ↕	3 42·5	5 20	1 16	4 4
3 24 ?	3 25 ↑	3 17 z	3 25 ↑	3 43 ↓	3 21 z	3 34 ↑	3 39 ↓	3 30 ↓	3 12 ↓	3 28·2	3 46	3 1	0 45
3 22 z	3 22 z	3 29 ↓	3 21 z	3 27 z	3 23 z	3 16 z	4 59 ↕	3 16 ↓	2 50 ?	3 33·8	5 10	2 46	2 24
3 24 z	3 9 z	3 15 z	3 18 ↑	3 14 z	3 13 ↕	3 10 z	3 36 z	2 58 ↑	3 34 ↕	3 22·6	3 53	2 15	1 38
3 12 ?	3 51 ?	3 7 ↕	3 7 z	3 21 ↓	3 38 ↓	3 38 z	3 24 ↓	3 8 ↕	3 24 ↕	3 42·8	5 17	2 44	2 33
3 20 ↑	3 17 z	3 21 ↓	3 16 ↓	3 20 z	4 31 ↕	3 26 ↕	3 19 z	3 11 z	3 22 ↕	3 35·6	4 58	2 50	2 8
3 14 z	3 17 ↑	3 24 z	3 17 z	3 22 z	3 18 ↑	3 26 ↑	3 17 z	3 29 ↓	3 1 ↓	3 23·6	3 55	2 49	1 6
3 18 z	3 20 z	3 19 z	3 18 z	3 19 z	3 16 z	3 32 ↓	3 19 ↑	3 14 ↕	3 19 z	3 27·2	4 5	3 6	0 59
3 18 z	3 20 z	3 18 z	3 21 z	3 21 z	3 21 z	3 16 z	3 14 z	3 30 ↓	2 54 ↕	3 21·2	**3 32**	2 48	0 44
3 13 ↑	3 14 ↑	3 16 ?	3 18 ↕	3 14 ↓	3 22 ↓	3 21 ↕	3 18 ↕	3 20 z	3 21 ↓	3 22·2	4 20	2 45	1 35
3 25·4	3 25·1	3 25·6	3 22·9	3 19·3	3 21·0	3 19·8	3 27·1	3 21·6	3 14·6	40 34·7	48 35	34 53	13 42

$\lambda = -115° 43' 50''$ W. $= -7$h. 42m. 55s. *December* 1882.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 11 z	2 27 ?	2 17 z	2 6 z	2 12 ↑	2 18 z	2 12 z	2 12 z	2 20 z	2 17 z	2 25·0	3 14	2 5	1 9
2 16 z	2 16 z	2 15 z	2 17 z	2 16 z	2 13 z	2 11 z	2 37 ↑	2 2 z	2 16 z	2 21·7	2 40	2 1	0 39
2 10 z	2 17 z	2 14 z	2 17 z	2 4 ↓	2 16 ↓	2 17 ↓	2 11 z	2 14 z	2 28 ↓	2 21·1	2 36	2 1	0 35
2 1 ↕	2 12 z	2 15 z	2 18 z	2 13 z	2 19 z	2 18 z	2 18 z	2 37 ↕	2 20 z	2 26·8	4 3	1 56	2 7
2 17 z	2 23 z	2 15 z	2 18 z	2 17 z	2 18 z	2 18 z	2 17 z	2 14 ?	1 29 ↕	2 17·6	**2 33**	1 21	1 12
2 13 z	2 15 z	2 14 z	2 19 z	2 18 z	2 17 z	2 17 ↓	2 15 z	2 19 z	2 18 z	2 20·7	2 36	2 12	0 24
2 17 z	2 16 z	2 15 z	2 15 z	2 19 z	2 19 z	2 20 z	2 19 z	2 18 z	2 20 z	2 21·2	2 44	2 9	0 35
2 17 z	2 17 z	2 16 z	2 18 z	2 18 z	2 13 z	2 8 z	2 11 z	2 15 ↕	2 5 z	2 18·4	2 34	2 4	0 30
2 2 z	2 16 z	2 10 ?	1 58 ?	2 15 z	2 18 z	2 11 ↓	2 14 ↓	2 15 z	2 14 ↕	2 21·6	3 12	1 56	1 16
2 17 z	2 17 z	2 18 ↑	2 18 z	2 15 z	2 14 z	2 17 z	2 12 z	4 10 ↕	2 18 ?	2 23·0	4 38	2 6	2 32
2 12 ↓	2 5 ↓	2 14 z	2 10 z	2 5 ↑	2 3 ?	2 12 z	2 12 ↑	2 21 z	2 6 ↕	2 21·1	3 1	1 55	1 6
2 16 ↑	2 13 ?	2 17 z	2 11 z	2 19 z	2 15 z	2 16 z	2 15 z	2 16 z	2 20 ↓	2 22·9	3 20	2 7	1 13
2 17 z	2 14 z	2 13 z	2 16 z	2 19 z	2 20 z	2 18 z	2 18 z	2 18 z	2 4 ↕	2 18·8	2 38	1 54	0 44
2 15 z	2 17 z	2 18 z	2 17 z	2 19 z	2 18 z	2 20 z	2 19 z	2 20 z	2 15 z	2 20·0	2 36	**2 14**	**0 22**
2 5 ↑	2 22 ↕	2 11 ?	2 28 ↓	2 39 ↕	1 27 ↑	2 0 ↑	2 8 ?	2 8 ↕	1 59 ↕	2 18·0	2 46	1 7	1 39
2 8 ↑	2 9 ?	2 20 ↕	2 17 ↓	2 14 ↕	2 19 z	2 19 z	2 17 z	2 14 z	2 19 z	**2 15·7**	3 31	0 36	2 55
2 21 z	2 18 z	2 17 z	2 16 z	2 15 z	2 2 ↓	2 7 z	2 28 ↓	2 22 z	2 20 z	2 21·4	2 44	2 0	0 44
2 13 ?	2 21 ↕	2 9 ↑	2 12 ↑	2 17 ↓	2 16 ↓	2 39 ↑	2 13 ↕	1 31 ?	1 46 ↕	2 17·0	2 40	1 22	1 18
2 18 z	2 18 z	2 17 z	2 18 z	2 18 z	2 15 z	2 13 ↓	2 18 z	2 14 z	2 16 ↕	2 22·8	3 40	2 9	1 31
2 38 z	2 38 ↕	2 28 ↓	2 18 z	4 3 z	2 33 ↕	3 43 ↕	3 18 ?	1 13 ↕	1 8 ↕	**2 43·5**	**6 10**	0 14	**5 56**
2 19 ↑	2 18 ?	2 10 ↓	2 20 z	2 16 z	2 19 z	2 42 ↓	2 27 ↕	2 21 ↓	2 20 ↕	2 36·4	3 54	**−1 6**	5 0
2 8 ↓	2 16 ↕	2 16 ↓	2 18 z	2 18 z	2 23 z	2 15 z	2 20 z	2 20 ?	2 3 ↓	2 22·8	3 40	0 55	2 45
2 19 z	2 18 z	2 8 ?	2 19 ↑	2 20 z	2 20 z	2 19 z	2 18 z	2 24 ↕	2 10 ↕	2 20·9	3 18	1 45	1 33
2 20 z	2 18 z	2 19 z	2 18 z	2 14 z	2 19 z	2 22 z	2 20 z	2 16 z	1 51 ↑	2 26·4	4 1	0 51	3 10
2 19 z	2 18 z	2 19 z	2 19 z	2 19 z	2 21 z	2 20 z	2 20 z	2 20 z	2 21 z	2 21·1	2 50	1 17	1 33
2 19 z	2 20 z	2 17 ↑	2 16 z	2 18 z	2 15 ↓	2 22 z	2 15 z	2 10 ↓	2 5 ↓	2 21·7	2 43	2 4	0 39
2 16 z	2 17 z	2 8 z	2 13 ?	2 17 z	2 13 z	1 34 ?	1 50 ↑	2 31 ↓	2 54 ↑	2 17·8	3 0	1 30	1 30
2 12 ?	2 16 z	2 13 ?	2 10 ↑	2 4 z	2 14 ↓	2 7 z	2 10 ?	2 7 z	2 47 ↕	2 19·7	3 27	1 54	1 33
2 14 ?	2 11 ↑	2 12 ↑	2 12 z	2 12 ?	2 7 z	2 15 z	2 20 ?	2 32 ↓	1 59 ?	2 24·2	4 4	1 31	2 33
1 53 ↕	2 18 z	2 1 z	2 10 ↓	2 14 z	2 9 z	2 11 z	2 13 z	2 16 z	2 18 ?	2 22·7	3 10	1 49	1 21
1 58 z	2 1 ↕	2 12 ↓	2 12 ↑	2 16 z	2 21 ↑	2 9 z	2 14 z	2 16 z	2 11 z	2 21·7	3 21	1 53	1 28
2 13·6	2 16·8	2 14·5	2 15·4	2 19·5	2 14·6	2 17·9	2 18·0	2 17·9	2 11·1	40 22·4	44 10	36 54	7 16

* Approximate.

January 1883. 39°+ Φ = + 62° 38′ 52″.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	° ′ 1 5 ↓	° ′ 1 10 ↓	° ′ 1 32 ?	° ′ 1 42 ↑	° ′ 1 26 ↑	° ′ 1 19 ↑	° ′ 1 40 ?	° ′ 1 29 ↑	° ′ 1 22 ?	° ′ 1 35 ↓	° ′ 1 23 z	° ′ 1 21 ?	° ′ 1 16 ↑	° ′ 1 13 ?
2	1 16 z	1 17 z	1 18 ↕	1 22 ↑	1 36 ↕	1 35 ↓	1 38 ↓	1 25 z	1 34 ↑	1 43 ↓	1 20 ↕	1 19 ↑	1 9 ↕	1 12 ↓
3	1 19 z	1 47 z	1 20 z	1 19 z	1 33 ↓	1 50 ↑	1 33 ↓	1 25 z	1 27 ↓	1 23 z	1 27 ↕	1 24 z	1 18 z	1 18 z
4	1 19 z	1 20 z	1 26 ↓	1 40 ↕	1 42 ↓	1 21 z	1 15 z	1 19 z	1 22 ↑	1 18 z	1 20 z	1 22 z	1 18 z	1 16 z
5	1 21 ↓	1 16 z	1 17 z	1 16 ↓	1 20 z	1 19 z	1 19 z	1 22 z	1 24 z	1 26 z	1 28 ?	1 27 ↑	1 28 ↓	1 10 ?
6	1 26 ↑	1 27 z	1 38 z	1 56 ?	2 3 ↓	2 2 ↕	1 50 ?	2 15 ↕	2 8 ↕	1 3 ↕	1 15 ↕	1 21 ↑	1 13 ?	1 11 z
7	1 23 z	1 20 ?	1 26 z	1 54 ↑	1 57 ↓	1 24 z	2 0 ↑	2 34 ↕	3 0 ↕	2 22 ↕	2 9 ↑	1 59 ↓	1 18 ?	0 41 ↑
8	1 12 z	1 19 z	0 59 ↕	1 32 ↕	1 31 z	1 35 ?	2 8 ↑	1 28 ↓	1 22 ?	1 24 ↑	1 22 ?	1 16 ↑	1 11 ↓	1 13 z
9	2 23 ↕	0 59 ↕	1 12 ?	1 24 ↑	1 51 ?	1 48 ↓	1 41 ↓	1 49 ↑	1 31 ?	1 27 z	1 17 ↓	1 3 ↕	1 5 ?	1 5 ↑
10	1 16 ↑	1 12 ↑	1 20 z	1 21 z	1 19 z	1 19 z	1 20 z	1 20 z	1 21 ↑	1 27 ↓	1 21 z	1 15 ?	1 16 z	1 11 z
11	1 14 z	1 17 ↑	1 18 z	1 18 z	1 19 z	1 19 z	1 20 z	1 20 z	1 21 z	1 20 z	1 19 z	1 15 z	1 15 z	1 15 z
12	1 9 ↑	1 10 z	1 20 z	1 24 z	1 30 z	1 19 z	1 20 z	1 27 ?	1 27 z	1 28 z	1 23 ↕	1 16 ?	1 10 z	1 13 z
13	1 16 z	1 16 z	1 17 z	1 17 z	1 18 ↓	1 26 z	1 52 z	1 50 ↕	1 36 ↕	1 29 z	1 26 z	1 17 z	1 14 z	1 14 z
14	1 14 ?	1 6 z	1 15 ?	1 22 z	1 17 z	1 22 z	1 27 z	1 25 ↑	1 30 z	1 23 z	1 27 ?	1 12 z	1 9 z	1 15 z
15	1 14 z	1 15 ↑	1 20 ↑	1 52 ↕	2 34 ↕	1 43 ↕	1 31 ↕	1 32 ↕	2 0 ↓	1 46 ↕	1 23 ↕	1 8 ↕	1 5 z	1 0 ↓
16	1 15 z	1 18	1 19 z	1 22 z	1 32 z	1 51 ?	1 34 z	1 36 ?	1 21 z	1 12 ↓	1 17 ↓	1 17 z	1 16 z	1 13 ?
17	1 20 ↑	2 11 ↕	1 49 ?	1 48 ?	1 50 ↕	1 39 ↓	2 5 ↑	2 57 ?	1 45 ?	1 14 ↓	1 19 ↓	1 17 ?	1 14 ?	1 11 ↕
18	1 23 ↕	1 15 ?	1 32 ↓	1 34 ↕	1 36 ↓	1 27 ?	1 23 ?	1 25 ?	1 19 ?	1 36 ↓	1 11 ↓	1 3 ↕	1 6 z	1 11 z
19	1 5 ?	1 13 z	1 16 z	1 20 z	1 55 ?	1 26 ↑	1 23 z	1 18 z	1 30 z	1 25 z	1 21 z	1 20 z	1 22 z	1 19 z
20	0 31 ↕	0 58 z	1 3 ↓	1 10 ?	1 47 ↑	1 54 ↓	1 45 ↕	2 45 ↓	1 50 ↕	1 48 ↑	1 26 ?	1 14 ?	1 8 z	1 10 ↓
21	1 22 ?	1 12 ↕	1 28 ↕	1 44 ↓	1 53 ↕	1 52 ?	1 52 ↕	1 42 ↓	1 37 ?	1 25 ↓	1 16 ?	1 5 z	1 11 ?	1 12 z
22	1 14 z	1 15 z	1 26 z	2 4 ?	2 6 ?	1 35 ↓	1 20 z	1 15 z	1 18 z	1 16 ?	1 14 ?	1 14 z	1 12 z	1 9 z
23	1 5 ↕	1 18 ↕	1 30 ↓	1 27 z	1 29 z	1 44 z	1 25 z	1 17 z	1 17 ↑	1 14 ↑	1 17 ?	1 18 z	1 16 z	1 11 z
24	1 11 z	1 15 z	1 19 z	1 21 z	1 19 z	1 20 z	1 24 z	1 34 ↓	1 35 ↑	1 35 ?	1 50 ↕	1 10 z	1 11 ↕	1 4 z
25	1 20 ↕	1 11 ↑	1 19 ↕	2 28 ?	2 43 ↕	1 30 ↕	2 10 ↕	1 39 ?	2 4 ↓	1 56 ↑	1 49 ?	1 28 ↕	1 18 ↕	1 31 ↕
26	1 19 ?	1 10 ?	0 56 ↑	1 25 ↑	1 37 ↕	3 12 ↕	2 53 ?	1 28 ↓	2 4 ↓	1 33 ↕	1 46 ↕	1 18 ↑	1 18 ↓	0 36 ↕
27	1 6 ↕	1 21 ↕	1 17 z	1 25 ?	1 11 ↕	1 33 ?	2 0 ↓	2 23 ↓	1 46 ?	1 35 ?	1 22 ?	1 12 ?	1 12 ↑	1 5 z
28	1 12 z	1 11 z	1 20 z	1 28 z	1 24 z	1 20 z	1 21 ↕	1 22 ↓	1 20 ?	1 23 ?	1 19 z	1 10 ↕	1 1 ↑	1 10 z
29	1 15 ?	1 17 z	1 14 z	1 22 z	1 25 z	1 48 ?	1 36 ↑	1 27 ?	1 35 z	1 27 ↓	1 22 ↑	1 14 z	1 11 z	1 5 z
30	1 13 z	1 26 ?	1 15 ↕	1 28 z	1 13 ↑	1 15 z	1 17 ↓	1 26 ?	1 27 z	1 20 z	1 18 ↑	1 19 z	1 12 z	1 11 z
31	0 44 ↓	1 1 ?	1 19 ↑	1 42 ↕	1 16 z	1 41 ↓	1 36 z	1 21 z	1 27 ?	1 19 ↓	1 15 z	1 12 z	1 10 z	1 5 z
Mean -	1 14·9	1 16·9	1 20·0	1 32·5	1 37·8	1 36·4	1 38·6	1 38·6	1 36·1	1 28·8	1 24·6	1 17·0	1 13·0	1 9·4

February 1883. 38°+ Φ + = 62° 38′ 52″.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	° ′ 2 16 z	° ′ 2 15 z	° ′ 2 28 ↕	° ′ 2 29 ↕	° ′ 2 34 ↕	° ′ 2 6 ↕	° ′ 2 20 ?	° ′ 2 27 ↕	° ′ 2 48 ↕	° ′ 3 31 ↕	° ′ 3 50 ↕	° ′ 2 32 ↕	° ′ 2 49 ↕	° ′ 3 5 ↓
2	2 20 ?	1 45 ↕	2 25 ↕	2 37 ↑	2 53 ?	3 32 ↕	3 45 ↕	2 46 ↓	3 57 ↓	4 21 z	2 49 ?	2 1 ↕	2 19 z	2 10 ↓
3	0 42 ↑	1 34 ↑	1 51 ↕	2 17 ↓	2 32 ↑	3 11 ?	2 42 ↓	3 17 ↕	3 2 ↕	2 59 ↕	2 39 ↑	2 13 ↕	2 13 ↓	2 15 ↓
4	1 41 ↓	1 43 ↑	2 1 ?	2 19 ↓	2 33 ↑	3 15 ?	2 59 ↓	2 51 ↕	2 45 z	3 10 ↕	2 49 ↓	2 4 ↑	1 54 ↕	2 4 z
5	2 20 ?	2 15 z	2 9 ↕	2 37 ?	2 8 ↕	2 28 ↕	2 13 ↑	2 30 ?	3 14 ↑	2 44 ↕	2 19 ?	2 19 ↑	2 15 ↑	2 15 ?
6	2 17 ?	2 14 ?	2 20 z	2 21 z	2 43 z	2 22 ↕	2 19 ?	2 54 ↑	3 44 ↕	3 48 ↓	2 50 ↕	2 20 z	2 26 ?	2 14 ↓
7	2 16 z	2 11 ?	2 19 ↓	2 22 ?	2 20 z	2 18 z	2 16 z	2 20 z	2 25 ↑	2 28 z	2 22 ↓	2 18 z	2 14 z	2 7 ↕
8	2 8 ↓	2 30 ↓	2 16 ↓	2 22 ↑	2 22 ↓	2 31 z	2 36 ↓	2 32 z	2 23 ?	2 26 z	2 20 z	2 9 z	2 9 z	2 6 z
9	2 1 ↕	2 17 ↑	2 19 ↕	2 26 ↑	2 17 ↑	2 20 z	2 18 z	2 18 z	2 23 z	2 23 z	2 23 ↓	2 15 z	2 6 z	2 2 z
10	2 12 z	2 13 ↕	2 17 z	2 19 z	2 25 ↑	2 44 ↑	2 33 ↓	2 28 ↓	2 21 z	2 17 z	2 18 z	2 11 z	2 7 z	2 10 z
11	2 23 ↕	2 8 ↕	2 17 ↕	2 16 z	2 17 z	2 20 z	2 22 z	2 38 z	2 28 ?	2 23 z	2 16 z	2 11 z	2 11 z	2 11 z
12	2 12 z	2 14 z	2 15 z	2 29 z	2 25 z	2 26 ↓	2 29 z	2 24 z	2 30 z	2 23 z	2 16 z	2 14 z	2 12 z	2 8 z
13	2 12 z	2 14 z	2 15 z	2 16 z	2 17 z	2 24 ↑	2 25 z	2 30 z	2 27 z	2 22 z	2 22	2 19 ?	2 12 ?	2 10 z
14	2 34 ↑	2 22 ↓	2 10 z	2 23 z	2 26 ?	2 42 ↕	3 37 ↕	2 54 ↕	2 51 z	2 45 ↕	2 17 ↑	2 15 ↑	2 10 ↕	2 6 ↕
15	2 18 ?	2 18 z	2 20 ↓	2 28 ↓	2 21 ?	2 20 ?	2 16 z	2 20 z	2 22 ?	2 22 z	2 19 z	2 16 ↑	2 15 ?	2 14 z
16	2 7 ↑	2 22 ↑	2 19 z	2 24 ?	2 39 ↑	2 27 ↓	2 47 ↕	2 37 z	2 36 ↕	2 29 ↕	2 27 ↓	2 13 ↑	2 14 z	2 15 z
17	2 16 ↕	2 23 ↕	2 26 ↑	2 20 z	2 34 ↑	2 48 ?	2 22 ?	2 41 ↑	3 32 ↕	2 30 ↓	2 18 ↕	2 16 ↑	2 14 ?	2 10 ↑
18	2 16 z	2 14 z	2 14 z	2 15 ?	2 21 z	2 20 z	2 22 ↓	2 25 ?	2 23 ↓	2 22 ↓	2 20 z	2 24 z	2 21 ↑	2 12 ↑
19	2 15 z	2 18 z	2 17 z	2 18 z	2 19 z	2 18 z	2 16 z	2 18 z	2 20 z	2 20 ?	2 18 z	2 18 z	2 18 z	2 18 z
20	2 11 ↕	2 8 ↕	2 24 z	2 59 ↑	2 49 ↓	3 32 ↕	2 47 ↕	2 53 ↕	2 22 ↓	2 14 ↓	2 11 ?	2 9 ?	2 14 ↕	2 16 ?
21	2 3 ↕	2 13 z	2 22 z	2 23 ↓	2 20 ↑	2 28 z	2 37 ?	2 48 ?	2 23 z	2 27 z	2 21 z	2 24 z	2 17 z	2 22 z
22	2 12 ↕	2 36 ?	2 36 ↓	3 11 ↓	2 57 ↑	3 26 ↕	3 9 ↕	3 29 ↕	3 2 z	3 14 ?	3 16 ↑	2 50 z	2 15 ?	2 9 ?
23	2 1 ↑	1 56 z	2 20 z	2 25 ?	2 27 ↓	2 45 ↑	3 18 ↑	3 39 ↕	4 15 ↕	2 23 z	2 21 z	2 22 ?	2 17 ↕	2 16 z
24	2 12 z	2 25 ↑	2 39 ↑	2 23 ↑	2 26 ↓	2 5 ↓	3 40 ?	7 14 ↓	5 13 ↑	3 14 ?	2 35 ↕	2 32 ↕	3 11 ↕	2 17 ↕
25	2 13 ↑	1 19 ↕	2 45 ↕	1 58 ↑	3 10 ↑	2 31 ↓	2 11 ?	2 25 ↕	2 18 ↕	2 26 ↕	2 19 ?	2 23 ↕	2 15 z	2 9 z
26	2 0 ?	2 17 z	2 18 z	2 24 z	2 49 ?	2 38 ↓	2 22 ↑	2 29 ↓	2 52 ?	3 3 ↓	2 43 ↓	2 22 ?	2 12 ?	2 9 ↕
27	2 42 ↓	2 18 ↓	2 23 ?	2 33 z	2 23 z	2 28 z	3 21 ↕	3 35 ?	4 2 ↕	3 59 ↕	4 1 ↕	2 36 ↓	2 51 ?	2 1 ?
28	2 36 ↕	2 8 ?	2 18 ↕	2 50 ↑	2 6 ↕	3 58 ?	3 9 ?	2 51 ↓	3 56 ↕	3 43 ↑	2 20 ?	2 2 ?	2 18 ↕	2 15 ?
Mean -	2 10·6	2 10·3	2 19·4	2 26·6	2 29·7	2 40·1	2 41·8	2 52·6	2 57·6	2 48·8	2 33·5	2 18·2	2 18·2	2 13·1

$\lambda = -115° 43' 50''$ W. $= -7$h. 42m. 55s. Local Mean Time. *January* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 16 ?	1 14 z	1 14 z	1 14 ↓	1 11 z	1 14 ?	1 18 ↓	1 14 ↨	1 18 ↑	1 15 ↓	1 20·0	3 0	1 5	1 55
1 13 ↑	1 17 z	1 16 z	1 16 z	1 15 z	1 18 z	1 17 z	1 17 z	1 17 z	1 17 z	1 21·1	1 43	1 9	0 34
1 20 z	1 16 z	1 18 z	1 18 z	1 19 z	1 19 z	1 18 z	1 18 z	1 18 z	1 16 z	1 23·5	1 53	0 58	0 55
1 16 z	1 16 z	1 17 z	1 15 z	1 16 z	1 8 ↨	1 11 z	1 18 z	0 59 ↑	0 5 ↨	1 15·8	1 48	−0 13	2 1
1 7 ↓	1 11 ↑	1 12 ↑	1 13 ?	0 56 ?	1 19 z	1 10 z	1 11 z	1 11 z	1 14 z	1 16·5	1 32	0 54	0 38
1 12 z	1 15 ?	1 12 ↑	1 18 z	1 18 z	1 11 z	1 12 z	1 34 z	1 12 ?	1 30 ?	1 29·2	2 59	0 55	2 4
1 16 z	1 10 z	1 7 ?	1 14 ↨	1 12 ?	1 18 ↑	1 16 ↑	1 31 ↨	0 38 ↑	0 48 ↑	1 32·4	3 6	0 10	2 56
1 13 ?	1 8 ↓	1 13 ↑	1 12 z	1 16 z	1 11 ↓	1 6 ↑	1 1 z	1 21 ↑	0 57 ?	1 17·9	2 14	0 38	1 36
1 1 z	1 13 ↓	1 10 ?	1 17 ↑	1 16 z	1 16 ?	1 22 z	1 23 ?	1 11 z	1 7 z	1 22·1	3 50	0 54	2 56
1 4 ↑	1 11 z	1 9 z	1 7 ?	1 1 ↓	1 7 ↨	1 18 ↓	1 16 z	1 16 z	1 15 z	1 15·1	1 30	0 42	0 48
1 17 z	1 17 z	1 18 z	1 18 z	1 17 z	1 18 z	1 18 z	1 15 z	1 21 ?	1 58 ?	1 19·5	2 0	1 1	0 59
1 16 z	1 18 z	1 17 z	1 16 z	1 16 z	1 17 z	1 17 z	1 16 z	1 16 z	1 16 z	1 18·4	1 32	1 6	0 26
1 13 z	1 10 z	1 14 z	1 14 z	1 13 z	1 17 z	1 19 z	1 15 z	1 14 z	1 9 z	1 20·2	2 8	1 8	1 0
1 13 z	1 14 ?	1 10 z	1 14 z	1 16 z	1 14 z	1 14 z	1 16 z	1 16 z	1 14 z	1 16·9	1 31	1 6	0 25
1 8 ↑	1 15 z	1 12 z	1 9 z	1 14 z	1 15 z	1 16 z	1 14 z	1 13 ?	0 50 ↨	1 22·9	2 34	0 44	1 50
1 13 ↓	1 9 ↓	1 14 z	1 3 z	1 14 z	1 11 z	1 12 z	1 11 ↑	1 2 ?	1 26 ↨	1 18·2	1 52	1 0	0 52
1 6 ↑	1 6 z	1 14 z	1 16 z	1 14 z	1 12 z	1 10 z	1 19 ↓	1 9 ↓	1 8 z	1 28·9	3 0	1 0	2 0
1 17 ?	1 8 z	1 11 z	1 9 z	1 15 z	1 14 z	1 14 z	1 15 z	1 13 z	1 34 ↨	1 18·8	2 5	0 59	1 6
1 18 z	1 16 z	1 15 z	1 15 z	1 12 z	1 13 z	1 15 z	1 14 z	1 4 z	1 4 ?	1 18·3	2 1	1 0	1 1
1 8 z	1 10 z	1 9 ↓	1 10 z	1 14 ↑	1 10 ↨	1 5 ↓	0 43 ↑	1 7 z	0 56 ?	1 18·4	2 59	0 22	2 37
1 6 z	1 12 z	1 13 z	1 12 z	1 15 z	1 15 z	1 14 z	1 12 z	1 12 z	1 11 z	1 22·2	2 36	0 45	1 51
1 5 ?	1 15 z	1 9 z	1 15 z	1 13 z	1 15 z	1 15 z	1 13 z	1 18 z	1 12 z	1 19·5	2 7	1 4	1 3
1 12 z	1 14 z	1 13 z	1 12 z	1 13 ?	1 15 z	1 14 z	1 14 z	1 13 z	1 13 z	1 17·5	1 45	0 25	1 20
1 6 z	0 50 ?	1 1 z	1 4 z	1 0 z	1 12 z	1 12 z	1 13 z	1 11 z	1 11 ↓	1 15·3	1 55	0 48	1 7
0 48 ↨	1 3 ?	1 14 z	1 7 z	1 14 z	1 6 z	1 58 ↑	0 56 ↓	1 16 z	1 6 ↓	1 30·6	2 46	0 37	2 9
1 4 ↑	1 4 ?	1 10 z	1 6 ↓	1 9 z	1 12 ↑	1 8 z	1 10 ?	1 13 z	1 2 ↓	1 24·4	4 0	0 26	3 34
1 7 z	1 5 ?	1 5 ?	1 6 ↓	1 5 ?	1 31 ↓	1 3 z	1 10 ↑	0 42 ?	1 4 ↑	1 18·6	2 34	−0 28	3 2
1 5 z	1 6 z	1 8 z	1 8 z	0 58 ?	0 48 z	1 15 z	1 16 z	1 13 z	1 18 ↑	1 13·2	1 29	0 47	0 42
1 0 ?	1 9 ↑	1 16 z	1 14 z	1 14 z	1 9 z	1 12 z	1 16 z	1 16 z	1 12 z	1 18·2	2 2	0 58	1 4
1 8 z	1 0 z	1 3 ↑	0 58 z	1 14 z	1 4 z	1 8 z	1 4 ↓	1 15 z	0 43 z	1 12·4	1 28	−0 38	2 6
1 10 ↓	1 0 ↑	1 2 ↓	1 8 ↑	1 10 ↓	1 8 ↑	1 14 z	1 15 z	1 17 z	1 16 z	1 14·5	1 45	0 35	1 10
1 9·6	1 10·1	1 11·4	1 11·5	1 11·9	1 12·8	1 14·9	1 13·5	1 11·0	1 9·3	40 20·0	43 0	38 22	4 38

$\lambda = -115° 43' 50''$ W. $= -7$h. 42m. 55s. *February* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 52 ↨	1 57 ↑	1 53 ↓	2 7 ↓	2 41 ?	1 58 ?	1 55 ?	1 58 ?	2 10 ↑	2 27 ?	2 26·2	3 50	1 51	1 59
2 31 ↨	1 57 ?	1 59 ↓	1 55 ?	2 7 ?	2 11 ?	2 12 z	1 58 z	3 26 ↨	1 40 ↨	2 34·0	6 10	−0 10	6 20
2 1 z	2 10 ↑	2 9 ?	2 14 ↓	2 7 ↓	2 54 z	2 34 ↑	2 9 ↓	2 2 z	4 46 ↨	2 26·4	5 45	0 41	5 4
2 6 ↓	2 10 ↓	2 10 ↑	2 12 ↑	1 59 ?	2 8 z	2 8 z	2 19 ?	1 53 ↓	2 12 ↑	2 18·6	3 50	1 2	2 48
2 18 ?	2 11 ↓	2 8 ↓	2 6 z	2 12 ↓	1 58 z	2 13 z	2 2 ?	2 6 ↑	2 13 z	2 18·0	3 18	1 56	1 22
2 13 ↨	2 11 z	2 10 z	2 11 z	2 10 z	2 11 z	2 12 z	2 35 ?	2 6 ?	2 14 z	2 27·7	4 10	2 4	2 6
2 10 z	2 10 z	2 10 z	2 13 z	2 13 z	2 10 z	2 13 z	2 15 z	2 11 z	2 14 z	2 15·6	2 30	2 5	0 25
2 5 z	2 8 z	2 9 z	2 8 z	2 8 z	2 12 z	2 12 z	2 13 ↓	2 10 z	2 26 ↨	2 16·7	2 38	2 4	0 34
2 6 z	2 17 z	2 2 z	2 8 ↑	2 1 z	1 53 ↓	2 4 z	1 26 ↓	2 3 ?	2 14 z	2 10·1	2 28	1 25	1 3
2 12 z	2 15 z	2 14 z	2 15 z	2 15 z	2 15 z	2 15 z	2 14 z	2 14 z	2 9 ↨	2 17·2	2 44	2 0	0 44
2 10 z	2 12 z	2 14 z	2 14 z	2 15 z	2 14 z	2 14 z	2 14 z	2 16 z	2 12 z	2 16·3	2 39	2 6	0 33
2 7 z	2 10 z	2 13 z	2 14 z	2 14 z	2 14 z	2 15 z	2 15 z	2 14 z	2 14 z	2 17·0	2 30	2 7	0 23
2 9 z	2 12 z	2 10 z	2 10 z	2 10 z	2 13 z	2 13 z	2 8 z	2 9 z	2 2 ↓	2 15·0	2 30	1 59	0 31
2 10 z	2 7 ↓	2 9 ↓	2 10 ↓	2 3 ↑	2 16 z	2 14 z	2 18 z	2 12 z	2 11 z	2 23·4	4 13	1 58	2 15
2 4 ↑	2 8 ↑	2 14 z	2 3 z	2 13 z	2 12 ?	2 19 ↨	2 14 z	2 1 ↓	2 16 z	2 16·0	2 28	1 59	0 29
2 15 z	2 15 z	2 15 z	2 14 z	2 14 z	2 14 z	2 14 z	2 11 z	2 14 z	2 23 ?	2 21·0	2 51	2 2	0 49
2 9 z	1 56 ↓	2 5 ↑	2 9 ↓	2 16 z	2 16 z	2 16 z	2 15 z	2 13 z	2 16 z	2 21·7	3 41	1 54	1 47
2 15 ↨	2 12 z	2 14 ↓	2 13 z	2 10 ↓	2 8 z	2 41 ↨	2 0 ?	2 7 z	2 15 ↓	2 16·8	2 49	1 58	0 51
2 17 ↓	2 9 z	2 11 z	2 14 z	2 13 ↓	2 14·z	2 12 z	2 12 ↑	2 10 z	2 4 z	2 15·3	2 22	2 4	0 18
2 12 z	2 12 z	2 11 z	2 14 z	2 16 z	2 16 z	2 16 z	2 14 z	2 13 z	2 17 ?	2 23·7	3 38	1 37	2 1
2 10 ↑	2 12 ?	2 16 ↑	2 2 ↓	2 1 ↑	1 51 ?	2 2 ↑	1 30 ↨	2 0 ↑	2 12 z	2 14·3	2 49	1 23	1 26
2 13 ?	1 50 ↓	2 7 ↓	2 21 z	2 8 ↑	2 6 z	2 2 z	3 6 z	1 52 ?	1 51 ↨	2 34·9	3 57	1 36	2 21
2 4 ↑	2 3 z	2 2 ↓	2 2 z	2 9 z	2 12 z	2 14 ?	2 4 ↑	1 45 ↑	2 6 ↑	2 23·6	4 22	0 25	3 57
1 48 ↓	1 46 z	1 54 ?	2 5 ↨	1 25 ↓	1 47 ↓	1 4 ↓	1 33 ↑	1 32 ?	1 40 ↑	2 31·7	7 27	0 28	6 59
2 13 ↨	2 11 ?	2 13 ?	2 14 z	2 11 z	2 41 ↓	2 9 ?	2 18 ?	2 18 ↓	2 54 ↓	2 19·3	4 30	1 0	3 30
2 5 ↨	2 10 z	2 2 z	2 7 z	2 14 z	2 0 ↑	2 7 ↓	2 8 ↑	2 17 ↨	2 3 z	2 19·6	3 20	1 58	1 22
1 53 ↓	2 9 ↑	2 8 z	2 16 ?	2 11 ?	1 58 ↨	1 52 z	1 34 ?	3 23 ↨	2 13 ↓	2 37·1	4 56	1 14	3 42
2 27 ↓	2 8 z	2 10 ?	2 9 z	2 8 ↨	2 3 ↑	2 16 ↨	1 51 ↑	2 36 ↓	1 55 ↨	2 30·6	6 8	1 20	4 48
2 9·1	2 7·4	2 8·3	2 10·0	2 9·1	2 10·1	2 9·9	2 6·9	2 12·6	2 16·4	40 21·7	45 27	37 50	7 37

March 1883. 38°+ $\Phi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	° ′ 2 49 ↓	° ′ 2 5 ↑	° ′ 2 16 ↕	° ′ 3 28 †	° ′ 4 6 ↓	° ′ 2 54 ↓	° ′ 2 56 ↕	° ′ 3 28 ↓	° ′ 3 12 ↑	° ′ 3 11 z	° ′ 2 50 ↓	° ′ 2 22 z	° ′ 2 10 ↑	° ′ 2 16 ↑
2	0 43 ↑	2 24 ↑	2 35 ↑	3 4 ↕	2 44 ?	3 50 ↑	2 9 ?	4 2 ?	6 8 ↓	2 51 ↕	2 9 ↕	2 24 ↕	2 7 ↓	2 14 ?
3	2 32 ↑	2 17 ↕	2 19 ?	2 23 z	2 28 ↓	2 37 ↓	3 19 ↓	3 16 ↓	3 5 ?	2 41 z	2 48 ?	2 8 ↓	2 15 ↑	2 13 ↓
4	2 26 ↓	2 17 ↑	2 21 ?	2 27 z	2 39 ?	2 29 z	2 40 ↑	2 43 ?	2 36 ↕	2 29 ?	2 32 ↓	2 18 ↑	2 7 ↓	2 12 ?
5	1 59 ↑	2 12 ↓	2 18 ↓	2 45 z	2 44 ↑	2 33 z	2 34 z	2 47 ↓	2 22 z	2 28 ?	2 20 ?	2 13 ↓	2 14 z	2 13 ↕
6	2 11 z	2 17 ↓	2 19 ↑	2 29 z	2 37 ?	2 30 ↑	2 38 ?	2 7 ↑	2 26 ↑	2 22 ↓	2 18 ↓	2 7 z	1 57 ↓	1 59 z
7	2 5 z	2 19 ?	1 49 ↓	2 31 ↓	2 38 ↓	2 49 ↕	2 44 ↑	2 37 z	2 33 ↑	3 5 ↕	2 14 ?	2 12 ↑	2 13 ?	2 9 ↑
8	1 58 ↕	2 6 ↓	2 20 z	2 25 ?	2 50 ↕	2 21 ?	3 10 ↕	3 28 ↑	2 28 z	2 17 z	2 25 z	2 9 ↓	2 19 ?	2 11 ↑
9	2 11 ↓	2 18 z	2 21 z	3 27 ↕	2 32 ↓	2 15 ↕	2 27 ?	2 30 ↑	2 45 ↑	2 48 ↓	2 30 ?	2 15 ↓	2 10 ↑	2 10 ↑
10	2 40 ↕	2 22 ?	2 23 ?	2 27 ↑	2 30 ↑	2 34 z	2 46 ?	2 54 ↑	2 45 ?	2 36 ?	2 26 z	2 13 ?	2 5 ?	2 9 ?
11	2 7 ↕	2 18 ↑	2 22 ?	2 22 ↑	2 37 ?	2 42 z	2 50 z	2 40 ↓	2 28 ↓	2 20 z	2 22 z	2 16 z	2 11 z	2 8 z
12	2 8 ↑	2 16 z	2 16 z	2 15 z	2 17 z	2 14 z	2 39 ↑	2 53 ?	2 29 ?	2 23 ?	2 7 ↓	2 12 ?	2 23 ?	2 1 ?
13	2 0 ↕	2 2 ↑	3 3 ↕	3 11 ↕	2 35 ?	3 24 ↓	2 12 ↕	2 9 ↕	2 26 ↓	2 17 ?	2 13 z	2 9 ?	2 11 z	2 13 z
14	1 51 ?	2 18 ↓	2 16 ↑	2 34 ↓	4 30 ↓	2 59 ?	2 22 ?	2 23 z	2 43 ?	2 27 ↕	2 29 ↑	2 17 ?	2 16 ?	2 9 z
15	1 59 ↑	2 22 ↑	2 23 z	2 26 z	2 21 ↓	2 19 z	2 18 z	2 24 ↓	2 22 z	2 23 ?	2 18 ↕	2 18 ↓	2 13 z	2 15 ?
16	2 9 ?	2 12 z	2 21 z	2 17 z	2 20 z	2 22 ?	2 22 z	2 38 z	2 38 ↓	2 21 ↑	2 17 ?	2 17 z	2 14 ↑	2 9 z
17	2 8 z	2 14 ?	2 22 z	2 24 z	2 24 z	2 22 ?	2 20 z	2 23 z	2 25 z	2 21 z	2 13 z	2 17 z	2 9 ?	2 14 ?
18	2 10 z	2 13 z	2 13 z	2 13 ?	2 24 ↕	3 3 ?	2 24 z	2 30 ↕	2 24 ?	2 19 z	2 19 ↓	2 17 z	2 6 z	2 9 z
19	2 10 z	2 10 ↑	2 15 ↓	2 19 ↓	2 14 z	2 16 z	2 18 z	2 20 z	2 21 z	2 21 ?	2 15 ↑	2 15 ↑	2 8 z	2 8 z
20	2 9 z	2 10 z	2 9 ?	2 10 z	2 12 z	2 16 z	2 19 z	2 21 z	2 24 z	2 22 z	2 20 z	2 14 z	2 8 z	2 7 z
21	2 6 ↑	2 4 ?	2 20 ?	2 26 ↕	2 35 ↓	2 44 ?	2 55 z	3 6 ?	2 45 ↓	2 56 ?	2 37 ↓	2 24 ↓	1 59 ?	2 7 ?
22	2 3 ?	1 41 z	2 24 ↑	2 41 ↑	3 7 ?	3 3 ?	2 58 ?	3 6 ?	3 18 ?	2 47 ↑	2 19 ↕	2 2 ?	2 10 z	1 57 z
23	2 13 ?	2 3 ?	2 11 ?	2 18 ↑	2 11 ↑	2 54 ?	2 38 ?	2 55 ↑	2 37 ?	2 29 ?	2 19 z	2 14 ↓	2 6 ?	2 7 z
24	2 1 z	2 12 z	2 14 z	2 11 z	2 16 z	2 16 z	2 24 ↑	2 27 z	2 35 z	2 27 z	2 19 z	2 17 z	2 12 z	2 8 z
25	2 13 ↓	2 9 z	2 13 z	2 14 z	2 16 z	2 31 ?	2 33 ?	2 36 z	2 27 z	2 31 z	2 14 z	2 9 ?	2 1 z	2 0 ↓
26	2 0 ↕	1 49 ↑	2 6 ?	2 19 z	2 24 ↓	2 26 ↑	2 38 ↓	2 26 ↓	2 34 ↕	2 26 ↓	2 28 ?	2 37 ↓	2 16 ?	2 25 z
27	1 47 ↕	2 24 ↑	3 41 ↑	3 37 ?	2 37 ↑	3 54 ↕	4 56 ↕	3 39 ↕	2 55 ↓	4 20 ↕	3 0 ?	2 21 ↑	2 28 ↕	2 31 ↕
28	1 57 ↕	2 2 ↕	2 2 ?	2 51 ↓	2 24 ↓	2 45 ↓	3 15 ↑	3 4 ↕	3 27 ↕	2 40 ↕	2 35 ↓	2 32 ↓	2 17 ↕	2 11 ↕
29	1 37 ↑	2 40 ?	2 12 ↓	2 59 ?	2 30 ?	2 54 ↑	3 31 ↕	3 32 ?	4 0 ↓	2 45 ↑	2 10 z	2 14 ?	2 7 ↕	1 59 z
30	1 57 ?	2 30 ↕	2 12 ↓	2 29 z	2 29 ↑	2 37 z	2 20 ?	2 27 ?	2 20 ↓	2 19 ?	2 17 ↓	2 26 ↑	2 13 ↕	2 8 ↓
31	2 5 z	2 11 ↑	2 38 ↓	2 28 ↑	2 41 ↕	2 33 ↓	2 40 ?	3 1 ?	2 44 ↓	2 30 ↓	2 19 ↓	2 14 ?	2 9 z	2 4 ↓
Mean -	2 4·6	2 12·8	2 21·1	2 35·2	2 37·0	2 41·4	2 43·1	2 48·1	2 47·8	2 35·9	2 23·3	2 16·2	2 10·8	2 9·5

April 1883. 38°+ $\Phi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	° ′ 1 54 ↓	° ′ 1 58 ↕	° ′ 2 10 ↓	° ′ 2 21 ?	° ′ 2 31 ?	° ′ 2 49 ↓	° ′ 2 24 ↕	° ′ 2 24 z	° ′ 2 19 z	° ′ 2 20 z	° ′ 2 13 z	° ′ 2 13 ↓	° ′ 2 12 z	° ′ 2 7 z
2	2 26 ↓	2 7 ↑	2 12 ↑	2 17 z	2 36 ?	2 56 ↑	2 34 z	2 26 ↓	2 41 ↑	2 43 z	2 16 z	2 14 z	2 3 z	2 9 ↓
3	1 40 ↕	1 33 ↕	2 10 ?	3 3 ↓	2 28 ↕	2 25 ↕	3 13 ↕	4 6 ↑	4 6 ↓	2 29 ?	2 51 ↓	2 27 ↕	2 45 ↕	2 28 ↕
4	1 53 ?	2 3 ↑	2 5 ↓	2 20 ↑	2 30 ↓	2 26 ?	3 30 ?	3 30 ↓	2 36 ↓	3 11 ↑	2 50 ?	2 30 ?	2 2 ?	2 7 ↕
5	2 39 ↓	2 31 ↓	2 16 ↓	2 8 ?	2 17 ↑	2 33 ↑	2 50 z	2 49 z	2 24 z	2 19 ?	2 27 ?	2 29 ?	2 18 ↓	2 9 ↑
6	1 58 ↓	2 40 z	2 16 z	2 17 z	2 27 ↑	2 26 ↕	2 40 ?	2 33 ↓	2 33 ?	2 25 ?	2 20 z	2 18 z	2 9 ?	2 6 z
7	2 6 z	2 11 z	2 11 z	2 11 z	2 14 z	2 14 z	2 17 ↑	2 22 z	2 23 z	2 24 z	2 22 z	2 18 z	2 12 z	2 8 z
8	2 1 z	2 5 ?	2 22 ?	2 16 z	2 38 ?	2 39 ?	3 5 ↑	3 32 ↕	2 48 ?	2 28 z	2 28 z	2 17 z	2 10 z	2 3 z
9	2 3 ↓	2 7 z	2 30 ?	2 4 z	2 10 ↑	3 13 ?	2 38 z	2 35 ↓	2 31 ↓	2 22 ↓	2 16 z	2 15 ↓	2 17 ?	2 0 z
10	2 10 z	2 10 z	2 8 z	2 6 z	2 30 ↓	2 22 ↓	2 28 ↓	2 26 z	2 27 ↑	2 31 z	2 26 z	2 20 z	2 9 ?	2 6 ?
11	1 59 ↓	2 21 ?	2 20 z	2 22 z	2 19 z	2 12 z	2 21 ↑	2 25 ↓	2 24 z	2 22 ?	2 22 z	2 20 ↓	2 8 z	2 6 z
12	2 5 ↑	2 15 z	2 8 z	2 35 z	2 42 z	3 4 ↓	2 39 z	2 27 ↑	2 24 ↑	2 22 z	2 14 ?	2 14 z	2 7 ?	2 2 ↓
13	1 36 ↕	2 27 ↑	2 26 z	2 16 z	2 25 z	2 32 ↑	2 42 ?	2 27 ↑	2 28 ?	2 34 ?	2 34 ↑	2 4 z	2 7 ?	2 5 ↑
14	2 11 z	2 9 z	2 12 z	2 11 z	2 10 z	2 22 z	2 21 ?	2 28 z	2 27 ?	2 27 ↑	2 21 z	2 11 ↓	2 9 ↓	2 8 ↓
15	2 8 ↑	2 9 ↕	2 27 ↕	2 20 z	2 13 z	2 14 ↑	2 47 ↕	3 0 ↓	2 35 ↕	2 27 ↑	2 16 ↓	2 20 z	2 13 ?	2 7 ↓
16	2 5 z	2 6 ↑	2 16 ?	2 56 ↓	2 20 z	2 29 z	2 20 z	2 25 z	2 28 z	2 25 z	2 30 ↓	2 15 ↓	2 3 ?	1 58 ↓
17	2 6 z	2 9 z	2 8 ↑	2 21 ↑	2 25 ↓	2 28 z	2 25 z	2 23 z	2 22 z	2 23 z	2 22 z	2 13 z	2 6 z	2 3 z
18	2 9 ↑	2 25 ↕	2 7 ↑	2 14 ↓	2 14 ?	2 53 z	2 50 ↕	2 51 ?	2 42 ?	2 30 ↓	2 5 ?	2 9 ↓	2 9 z	2 5 ?
19	1 15 ↕	1 59 ↕	1 3 ↓	1 40 ↕	1 40 ↑	1 43 ↑	3 10 ?	4 25 ↕	4 5 ↓	2 52 ?	2 26 ↓	2 36 ↓	2 25 ?	2 15 ?
20	2 23 ?	3 9 ↓	2 24 ↕	2 0 z	2 15 ↕	2 41 ↑	2 45 ?	2 17 ?	2 53 ↕	4 0 ↑	2 58 ↓	2 9 ↓	2 0 z	2 8 z
21	2 12 ↕	2 9 z	2 17 ?	2 22 ?	2 24 ?	2 28 z	2 23 z	2 29 z	2 26 z	2 25 ?	2 21 z	2 20 z	2 14 z	2 12 z
22	2 13 z	2 18 ?	2 14 ?	2 9 ↑	2 22 z	2 31 z	2 32 z	2 31 ↓	2 37 ↓	2 25 ↑	2 24 ↑	2 14 ↓	2 17 ↓	2 13 ↓
23	2 11 z	2 10 z	2 22 z	2 14 ?	2 19 ↑	2 21 z	2 31 z	2 28 ↓	2 27 z	2 28 z	2 23 z	2 22 ↓	2 9 z	2 9 z
24	2 7 z	2 9 z	2 11 z	2 13 z	2 19 ↑	2 4 ?	2 23 z	2 44 ↕	2 55 ↕	2 59 ↕	3 5 ?	2 39 ↑	3 16 ↕	3 17 ↕
25	1 54 z	2 4 ↕	2 22 ↕	2 6 ?	2 14 ↑	2 44 ?	2 51 ↕	2 53 ↕	2 36 ↕	2 40 ↕	2 36 ↕	2 29 ↓	2 21 ↕	2 15 ↕
26	2 2 ↕	2 16 ↕	2 12 ?	2 20 z	2 24 ?	2 39 ↕	2 37 ↓	2 38 ?	3 13 ↕	3 22 ?	2 30 ?	2 25 ↕	2 25 ↑	2 10 ↕
27	2 9 ↑	2 13 ↑	2 28 ↑	2 31 ↑	2 31 ↓	3 15 ↓	3 8 ↑	2 45 ↓	2 36 ?	2 30 ↓	2 24 ↓	2 24 ?	2 13 z	2 17 ?
28	1 51 z	2 13 ↑	2 9 ↑	2 24 ↑	2 43 z	2 37 z	2 41 ↓	2 29 z	2 28 z	2 25 z	2 23 ↑	2 16 z	2 11 z	2 11 z
29	2 20 ↓	2 17 z	2 15 ↑	2 20 ↓	2 38 z	2 56 z	3 50 ↕	2 54 ↓	2 29 z	2 27 z	2 24 z	2 24 z	2 14 ↑	2 9 z
30	2 19 z	2 10 ↑	2 16 ?	2 20 ?	2 50 z	2 47 ?	3 8 ↓	2 56 ↑	2 49 z	2 36 ?	2 45 ?	2 32 ↕	2 9 z	2 13 ?
Mean -	2 4·2	2 13·1	2 13·2	2 17·9	2 23·6	2 34·1	2 44·1	2 45·3	2 40·4	2 35·7	2 27·7	2 19·9	2 14 4	2 10·9

$\lambda = -115^\circ\ 43'\ 50''$ W. $= -$ 7h. 42m. 55s. Local Mean Time. *March* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 1 ?	2 11 z	2 9 ?	2 1 z	2 59 ↨	2 26 ?	2 32 ↓	2 6 ↓	1 53 ↑	1 19 ↓	2 34·2	4 6	1 11	2 55
2 16 z	2 5 ?	2 7 z	2 5 z	2 1 z	2 13 z	2 6 ↓	1 50 ↕	1 42 z	2 25 ?	2 30·6	6 45	0 36	6 9
2 9 ?	2 7 z	2 4 z	2 9 ?	2 7 z	2 10 z	2 3 ↑	1 55 ↓	1 45 ↓	2 16 ↕	2 22·8	3 27	0 29	2 58
2 19 ?	2 4 z	2 10 ?	2 5 ?	2 10 z	2 11 ↑	2 13 ↑	2 9 ↓	2 6 ?	1 43 ↓	2 18·6	2 45	1 20	1 25
2 13 ?	2 13 ↓	2 7 z	2 13 z	2 13 ?	2 12 z	2 14 z	2 29 ?	2 10 z	2 10 z	2 19·8	2 50	1 45	1 5
1 59 z	2 4 ↓	2 9 ?	2 9 ?	1 55 ↓	2 13 ?	2 6 ↓	1 50 ↓	1 59 ↑	1 58 ↑	2 11·6	2 40	1 11	1 29
2 10 ?	2 7 ?	2 5 z	2 12 ↓	2 1 z	2 3 z	1 5 ↕	1 7 ↓	1 51 z	2 9 ↑	2 12·0	3 9	0 45	2 24
1 48 ?	1 50 ↑	1 45 z	2 22 ↑	2 13 ↓	1 49 ↑	1 28 ↕	1 59 ?	2 10 z	2 11 ↑	2 15·1	3 30	1 10	2 20
2 5 ?	2 9 z	2 14 z	2 9 z	2 8 ?	2 10 ?	2 9 z	2 5 ↓	2 11 ?	2 5 ?	2 20·2	3 39	2 2	1 37
2 7 z	2 2 z	2 9 z	2 6 z	2 11 z	2 13 z	2 14 z	2 14 z	2 14 z	2 32 ?	2 22·2	2 55	2 1	0 54
2 8 z	2 11 z	2 12 z	2 14 z	2 14 z	2 13 z	2 14 z	2 14 z	2 11 ?	2 12 z	2 19·4	2 51	2 2	0 49
2 5 ↑	2 11 z	2 11 z	2 9 z	2 11 z	2 10 z	1 48 z	2 32 ↕	2 15 ↑	1 52 ?	2 14·9	2 58	1 42	1 16
2 14 z	2 12 ↓	2 13 z	2 15 z	2 15 z	2 15 z	2 16 z	2 14 z	2 8 z	2 24 ↑	2 21·3	3 52	1 47	2 5
2 10 z	2 13 z	2 11 z	2 13 z	2 11 ↑	2 10 z	2 14 ↑	2 18 ↑	2 34 ↕	2 29 ↑	2 25·7	5 4	1 48	3 16
2 10 z	2 10 z	2 13 z	2 14 z	2 13 z	2 13 z	2 13 z	2 9 z	2 15 ↓	2 3 ↓	2 15·6	3 48	1 59	1 49
2 9 z	2 10 z	2 10 z	2 12 z	2 10 z	2 17 z	2 11 z	2 10 z	2 11 z	2 23 ↓	2 16·7	2 40	2 7	0 33
2 12 z	2 7 z	2 3 z	2 9 z	2 7 z	2 10 z	2 6 z	2 14 ↓	2 10 z	2 10 z	2 14·3	2 26	2 2	0 24
2 7 z	2 10 z	2 10 z	2 10 z	2 9 z	2 9 z	2 8 z	2 7 z	2 7 z	2 6 z	2 15·3	3 11	2 6	1 5
2 8 z	2 8 z	2 8 z	2 8 z	2 7 z	2 8 z	2 8 z	2 8 z	2 8 z	2 8 z	2 12·0	2 23	2 6	0 17
2 5 ?	2 2 z	2 6 z	2 3 ?	2 6 z	2 2 z	2 1 z	1 50 ↓	3 39 ↓	2 0 ↑	2 13·1	3 50	1 34	2 16
2 12 ?	1 59 ?	1 38 ?	2 0 ↓	2 16 z	1 54 ↓	1 54 ↑	2 12 ?	1 20 z	3 11 ↕	2 19·2	3 30	1 20	2 10
2 2 ?	1 59 ?	1 53 ?	1 48 ↑	1 58 z	2 7 z	1 59 z	1 54 ↕	1 54 ↑	1 17 ?	2 16·1	3 34	0 53	2 41
2 4 ↓	2 4 ?	1 55 z	2 4 z	1 55 z	2 3 z	1 58 z	2 1 ↓	1 55 ?	1 53 ↑	2 12·8	3 2	1 12	1 50
2 5 z	1 57 z	2 0 z	1 53 ?	1 59 ?	1 58 z	2 5 z	2 2 ↕	1 47 ?	1 59 ↓	2 9·1	2 36	1 23	1 13
2 5 z	2 5 ?	2 6 z	2 4 z	2 3 ↓	2 2 z	2 3 ?	2 5 z	1 44 ?	1 49 ↕	2 10·5	2 37	1 33	1 4
2 28 ↑	1 44 ↕	2 7 ↓	1 54 ?	1 44 z	2 40 ↓	1 36 ↕	2 4 ↑	2 2 z	1 51 ↕	2 12·7	2 47	1 18	1 29
2 0 ↕	1 47 ↕	1 58 z	1 34 ↑	2 20 ↑	1 58 ?	2 21 ?	1 54 z	1 59 ?	1 53 ↕	2 39·7	6 10	0 26	5 44
2 1 z	2 0 ↓	1 46 ↑	1 41 ↕	2 0 ↕	1 49 ?	2 16 ↓	2 7 ↑	2 4 ↕	2 7 ↓	2 19·7	4 56	0 12	4 44
2 6 z	1 59 ?	2 11 ?	1 55 ↑	1 53 ?	2 0 ↑	2 2 ↓	2 8 z	2 6 z	2 24 ?	2 24·8	4 14	1 32	2 42
2 5 z	2 6 z	1 54 ?	1 55 z	1 47 ↕	1 52 z	2 11 z	2 7 z	2 6 z	2 6 z	2 12·2	2 38	1 44	0 54
2 4 ↑	2 6 z	2 4 ↓	1 57 ↕	2 1 ↕	2 6 ↑	1 55 z	2 2 ↑	2 21 ↑	1 20 ↕	2 15·5	3 4	1 20	1 44
2 7·6	2 4·3	2 4·1	2 4·0	2 7·0	2 7·6	2 3·5	2 4·4	2 5·7	2 4·7	40 18·3	44 45	38 12	6 33

$\lambda = -115^\circ\ 43'\ 50''$ W. $= -$ 7h. 42m. 55s. *April* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 6 z	2 0 ↑	2 5 ↑	2 8 z	2 7 z	2 4 z	2 10 ↑	2 12 ↕	1 57 ?	2 5 z	2 12·0	2 49	1 52	0 57
1 58 ↓	1 59 ↓	1 59 ?	2 5 ?	2 7 z	2 8 z	2 2 z	2 1 z	1 57 z	1 35 ↕	2 13·8	2 58	1 30	1 28
2 40 ↑	2 13 ?	2 1 ↓	2 6 ?	1 52 z	2 25 ?	1 57 ↓	1 51 ↕	1 50 ↕	1 52 ↑	2 26·3	4 19	0 20	3 59
2 6 ?	2 7 ?	1 58 ↓	1 47 ?	2 6 z	2 5 ?	2 0 ?	2 11 ?	2 10 ↓	2 29 ↓	2 21·3	3 46	0 23	3 23
1 59 z	1 52 z	1 58 ↕	2 7 z	1 46 ?	2 7 ↓	2 29 ↓	2 9 ↕	2 43 ↕	2 0 ↕	2 18·3	3 20	1 44	1 36
2 1 z	1 57 ↓	2 2 ↑	2 6 z	2 9 z	2 8 z	2 8 z	2 8 z	2 5 z	2 33 z	2 16·0	2 42	1 49	0 53
2 5 z	2 6 z	1 57 ↑	2 4 ?	2 22 ↑	2 3 z	2 8 ↓	2 6 z	2 3 ↓	1 48 ↓	2 10·6	2 25	1 47	0 38
2 2 z	1 55 z	2 0 z	2 0 z	2 2 z	2 5 z	2 9 z	2 7 z	2 8 ↑	2 6 z	2 18·6	3 38	1 55	1 43
1 58 z	2 2 z	2 3 z	1 59 z	2 7 z	2 12 z	2 12 ↑	2 10 z	2 8 z	2 10 z	2 15·1	3 16	1 58	1 18
1 59 ↓	1 59 z	1 55 ↑	1 56 ↑	2 0 ?	2 9 z	2 3 ↓	1 54 z	2 35 ↓	2 17 ↓	2 12·8	2 48	1 53	0 55
2 4 z	2 1 z	2 5 z	2 2 z	2 8 z	2 6 z	2 8 z	1 59 ↑	2 39 ↑	1 43 ↕	2 12·3	2 44	1 35	1 9
2 2 z	2 2 ↓	2 5 ?	2 8 z	2 9 z	2 10 z	2 9 z	2 10 z	2 7 z	2 8 ↑	2 16·2	3 6	2 0	1 6
2 3 z	2 5 z	1 56 ↓	2 0 z	1 59 ↑	2 9 ?	2 9 ↕	2 8 z	2 9 z	2 7 ↑	2 13·7	2 44	1 14	1 30
2 8 z	2 6 z	2 6 z	2 6 ↑	2 8 z	2 10 z	2 9 z	2 10 z	2 9 z	2 8 ?	2 12·8	2 28	2 6	0 22
2 1 z	1 58 ?	1 57 ?	1 54 z	1 57 z	1 54 ↑	1 58 z	2 1 ↑	2 7 z	2 7 ↓	2 12·9	3 0	1 53	1 7
2 0 z	1 59 z	2 0 z	2 5 z	2 2 z	2 3 z	1 56 z	2 0 ?	2 11 ↑	2 1 z	2 12·2	2 57	1 56	1 1
2 1 ?	1 59 ↓	2 2 ?	2 3 z	2 5 z	2 7 z	2 9 z	2 8 z	2 9 z	2 7 z	2 11·8	2 28	1 58	0 30
1 53 ?	1 49 ↓	1 44 ?	1 23 ↕	1 47 ?	1 35 ↕	1 42 ?	0 39 ↕	1 34 ↕	1 58 ?	2 3·6	2 55	0 30	2 25
2 4 ↕	2 17 ↑	1 59 ↑	1 46 ↑	0 55 ↕	1 25 ?	2 11 ↕	1 40 ↕	1 58 ↕	2 8 ↓	2 9·9	4 59	0 50	4 9
2 11 z	2 9 z	2 10 z	2 11 z	2 8 ↓	2 9 z	2 9 ↓	2 7 ↓	2 17 ↕	2 11 ↑	2 24·3	4 2	1 59	2 3
2 7 z	2 7 z	2 8 z	2 8 ?	2 13 z	2 14 z	2 14 z	2 12 z	2 14 z	2 13 z	2 16·3	2 30	2 7	0 23
2 9 z	2 6 z	2 3 ↓	2 4 z	2 12 z	2 12 z	2 12 z	2 12 z	2 11 z	2 12 z	2 16·4	2 39	2 2	0 37
2 8 z	2 4 ?	2 1 z	2 5 z	2 6 z	2 7 z	2 9 z	2 9 z	2 8 z	2 7 z	2 14·0	2 31	2 0	0 31
2 36 ↕	2 21 ?	2 5 ↕	1 19 ↓	0 53 ↑	1 52 ↑	1 49 ↑	1 47 ↑	1 56 ↑	1 54 ?	2 17·2	3 37	0 44	2 53
2 9 ↕	2 9 ↓	2 6 ?	1 44 ↑	1 47 ↕	2 14 ?	2 11 ↓	1 10 ↕	2 28 ↕	2 5 ?	2 15·3	3 21	0 24	2 57
2 18 ↕	1 52 ?	2 0 ↕	2 0 ↑	1 48 ?	2 7 ?	1 55 ↓	1 59 ?	2 15 ↕	1 55 ?	2 18·4	3 37	1 45	1 52
2 17 ↓	2 11 ↑	2 8 ↓	2 9 z	2 5 ↓	2 16 ↑	2 12 z	1 57 ↓	1 56 ↕	2 3 ↑	2 21·6	3 19	1 53	1 26
2 10 ↑	2 4 ↓	2 5 z	2 5 z	2 11 z	2 14 z	2 15 z	2 17 z	2 10 z	2 3 ?	2 16·5	2 43	1 49	0 54
2 8 z	2 7 z	2 2 z	2 7 z	2 6 ↑	2 2 z	2 10 ?	2 6 z	2 10 ?	2 12 ↓	2 21·9	3 59	2 1	1 58
2 8 ?	2 5 z	2 7 ↑	2 7 z	2 3 z	2 9 ↓	2 2 ↑	1 47 ↕	2 0 ↕	2 17 ↓	2 21·5	3 9	1 47	1 22
2 7·0	2 3·4	2 1·6	1 59·5	1 58·7	2 5·4	2 6·2	1 58·9	2 8·8	2 5·1	40 15·9	42 59	38 20	4 39

May 1883. 39°+ ☉ = + 62° 38′ 52″.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	° ′ 1 5 ‡	° ′ 1 14 z	° ′ 1 22 ‡	° ′ 1 33 ‡	° ′ 1 35 ‡	° ′ 1 22 z	° ′ 1 28 z	° ′ 1 36 ↓	° ′ 1 45 ↓	° ′ 1 36 ↓	° ′ 1 24 ?	° ′ 1 15 ↑	° ′ 1 16 z	° ′ 1 18 z
2	1 4 ↑	1 4 ?	1 19 ↓	1 20 ↓	1 44 ‡	2 14 ↑	3 25 ‡	1 54 ?	1 36 ↑	1 28 z	1 16 ↑	1 20 ?	1 14 ?	1 9 ↓
3	1 3 ‡	1 23 ‡	1 24 ‡	1 20 ↑	1 39 ↑	1 27 ↓	1 35 ?	1 31 z	1 32 ?	1 30 ?	1 27 ?	1 18 z	1 18 z	1 12 z
4	1 8 z	1 30 ‡	1 54 ‡	1 35 ?	1 33 z	1 24 z	1 29 z	1 27 ↓	1 32 z	1 21 ‡	1 11 ↓	1 8 z	1 3 z	1 7 ↓
5	1 7 ?	1 11 ↓	1 12 z	1 11 z	1 25 z	1 51 ↑	1 51 ?	1 25 z	1 33 z	1 23 ?	1 22 z	1 11 ?	1 4 ?	1 1 ?
6	0 56 ↓	1 5 ↓	1 8 ↑	1 13 ?	1 36 ↑	1 50 ?	2 2 z	1 24 ↓	1 28 z	1 20 ↓	1 13 ?	1 8 z	1 3 z	0 59 z
7	1 3 z	1 10 z	1 10 ?	1 14 ↓	1 20 ?	1 29 ↑	1 40 ?	1 34 ?	1 32 ?	1 32 ↑	1 18 ↑	1 13 ?	1 14 z	1 6 z
8	1 4 z	1 7 ↓	1 39 ‡	1 28 ?	1 32 ?	1 49 z	1 20 ↑	1 32 ?	1 32 ↓	1 27 ↓	1 13 z	1 14 z	1 1 ?	1 8 z
9	1 7 ‡	1 35 ?	1 28 z	1 18 z	1 26 z	1 23 ↑	1 35 z	1 28 z	1 26 z	1 23 z	1 13 z	1 11 ↓	1 7 ?	1 8 z
10	1 12 z	1 14 z	1 14 z	1 12 ↑	1 22 z	1 23 ?	1 30 z	1 30 ↓	1 35 ?	1 25 ↑	1 25 z	1 5 ?	1 0 ‡	1 4 z
11	1 26 ‡	1 17 ?	1 18 ↓	1 20 ↑	1 31 ↓	1 42 ↑	1 37 ?	1 38 z	1 32 z	1 28 z	1 23 z	1 16 z	1 11 z	1 8 z
12	1 4 ↑	1 9 z	1 19 ?	1 16 z	1 21 z	1 30 z	1 28 z	1 36 ↓	1 32 ↑	1 24 z	1 18 z	1 13 ?	1 7 ↑	1 8 ?
13	1 17 ↓	1 11 z	1 14 z	1 10 z	1 13 ↑	1 43 ↑	1 52 ↑	2 2 z	1 53 ↓	1 24 z	1 13 z	1 9 ↓	1 4 z	1 4 z
14	1 16 z	0 59 ‡	1 18 ?	1 28 ?	1 21 z	1 43 ↓	1 56 z	1 33 z	1 32 z	1 33 ?	1 12 ?	1 13 ?	1 6 z	1 4 z
15	1 18 ↑	1 11 ?	1 21 ‡	1 25 ↑	1 51 ↓	1 34 ↓	1 52 z	1 38 z	1 37 z	1 33 ‡	1 17 z	1 13 z	1 4 z	1 9 z
16	0 45 ?	0 44 ↑	1 4 z	1 10 ↑	1 47 ↓	1 8 ?	1 41 ↑	2 46 ?	2 17 ↓	1 15 ↓	1 7 ↑	1 5 z	1 5 z	1 4 z
17	1 0 z	0 56 ↓	1 26 ‡	1 30 z	1 31 ?	1 38 ‡	1 43 ?	1 57 ‡	1 25 ?	1 21 ?	1 10 z	0 52 z	0 59 ↓	1 3 z
18	1 10 z	1 13 z	1 9 ?	1 25 ↓	1 29 ?	1 35 ?	1 35 ?	1 32 z	1 28 z	1 22 z	1 23 z	1 18 z	1 19 ↓	1 15 z
19	1 7 z	1 12 ?	1 14 ↓	1 16 ?	1 10 ?	2 46 ‡	2 23 ↑	2 34 ‡	1 46 ?	1 46 z	1 10 z	1 5 ↓	1 7 z	1 11 z
20	1 13 ↑	1 2 ↓	1 17 ↑	1 37 ?	1 39 ?	1 42 ↓	1 29 ↑	1 50 ?	1 40 ‡	1 43 ?	1 36 ?	1 17 ?	1 7 ?	1 6 ?
21	2 18 ‡	0 49 ↓	1 26 ‡	2 58 ‡	2 7 ‡	1 46 ‡	3 2 ‡	2 20 ‡	1 51 ?	1 32 ‡	1 32 ‡	1 53 ‡	2 9 ‡	1 37 ?
22	0 19 ‡	0 58 z	1 23 ‡	1 10 ?	1 28 z	1 58 ↑	2 27 ?	2 18 ?	1 41 ?	1 40 ‡	1 19 ?	1 12 ‡	1 16 ?	1 14 ?
23	1 16 ↓	0 54 ‡	1 14 ↓	1 26 z	1 28 z	1 59 ?	1 47 ?	2 35 ↑	2 7 z	1 23 ?	1 22 ↑	1 14 ↓	1 13 z	1 8 z
24	0 54 ‡	1 26 ‡	1 20 ↓	1 36 ?	1 39 ↑	1 54 z	2 5 ?	1 43 ?	1 36 z	1 31 ?	1 25 z	1 16 z	1 2 z	1 6 z
25	1 13 ?	1 13 z	1 20 z	1 15 ?	1 29 ?	1 40 ↓	1 39 ↑	1 46 ↓	1 35 ↓	1 35 ?	1 22 z	1 19 ‡	1 9 ?	1 13 z
26	1 7 ‡	0 52 ↓	1 14 ?	1 27 ↓	1 46 ↓	1 45 ‡	1 46 ?	2 27 ‡	1 38 ↓	1 47 ?	1 30 ↓	1 23 ↓	1 8 ↑	1 9 ?
27	1 21 ↓	1 24 ↓	1 23 z	1 23 ↓	1 49 ‡	2 20 ↑	1 29 ↓	1 33 ↓	1 37 ?	1 20 z	1 32 ↑	1 25 ‡	1 20 z	1 11 ↓
28	1 1 ↑	0 57 ?	1 19 ?	1 27 ‡	1 28 ?	1 46 z	1 42 z	2 28 ?	2 17 ?	1 27 z	1 13 ?	1 12 ?	1 10 ?	1 8 z
29	1 50 ‡	1 18 ?	1 11 ?	1 23 z	1 29 ?	2 2 ‡	1 46 ↓	2 20 ?	1 53 ↓	1 29 ?	1 24 ↑	1 14 z	1 9 ↓	1 13 z
30	1 11 ‡	1 14 ‡	1 19 ?	1 29 ?	1 28 z	1 40 ?	2 5 ?	1 48 ‡	1 54 ↓	1 25 ?	1 18 ↓	1 12 z	1 26 z	1 15 z
31	0 57 ?	1 5 ?	1 7 ?	1 33 ↓	1 49 ?	1 55 ?	1 43 z	1 37 ↑	1 36 ↓	1 34 ?	1 21 ?	1 5 z	1 7 ‡	1 7 ↑
Mean -	1 9·4	1 8·9	1 18·9	1 25·4	1 33·1	1 44·5	1 50·4	1 51·0	1 40·6	1 28·9	1 19·6	1 13·8	1 10·9	1 9·2

June 1883. 39°+ ☉ + 62° 38′ 52″.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	° ′ 1 12 ↓	° ′ 1 9 ↓	° ′ 1 3 ‡	° ′ 1 52 ↓	° ′ 1 28 ↑	° ′ 1 25 ↑	° ′ 1 39 ‡	° ′ 2 5 ↓	° ′ 1 50 ?	° ′ 1 55 z	° ′ 1 25 z	° ′ 1 16 ?	° ′ 1 4 z	° ′ 1 8 z
2	0 39 ↑	0 50 ↓	1 17 ?	1 10 ?	1 24 ↓	1 56 ‡	2 22 ↓	3 36 ‡	2 24 ‡	3 28 ↓	0 49 ‡	0 51 ‡	1 7 ‡	1 1 ‡
3	0 52 ↑	1 18 ↓	1 1 ?	1 25 ↑	1 32 ?	1 26 ?	1 40 ?	2 26 ↓	2 24 ↓	1 30 ?	1 14 ↓	1 15 z	1 4 z	1 24 ↑
4	1 19 z	1 14 z	1 12 z	1 14 z	1 39 z	1 44 z	2 3 ?	1 34 ↓	1 28 z	1 33 ↓	1 23 ?	1 18 ?	1 16 ?	1 7 z
5	1 15 z	1 20 ?	1 25 z	1 24 z	1 29 z	1 33 z	1 31 z	1 35 ↑	1 38 z	1 29 z	1 24 z	1 19 ?	1 13 z	1 12 z
6	0 49 ↓	1 24 ↑	2 23 ‡	1 26 ↓	1 48 ?	1 49 ↑	2 33 ‡	2 20 ↑	1 57 ?	1 43 ?	1 40 ?	1 27 ?	1 17 z	1 9 ↑
7	1 5 z	1 10 z	1 15 ↑	1 27 z	1 33 z	1 49 z	1 58 z	1 46 z	1 45 z	1 33 z	1 38 z	1 25 z	1 8 ?	1 12 ?
8	1 6 z	1 4 z	1 14 ?	1 19 ?	1 52 ↓	1 56 ?	2 30 ‡	2 5 ?	2 0 ?	1 38 z	1 30 z	1 19 z	1 8 z	1 8 z
9	0 36 ↑	1 0 ?	1 15 ?	1 21 z	1 30 ?	2 25 ‡	2 37 ↓	2 9 ?	1 53 ↑	1 47 z	1 28 z	1 21 z	1 9 z	1 13 z
10	1 14 z	1 14 ↓	1 20 ?	1 28 z	1 29 ↓	1 40 ↑	1 47 z	1 41 z	1 39 z	1 36 ↓	1 28 ↓	1 29 ↑	1 24 ↑	1 16 ?
11	0 53 ↑	0 58 ?	1 2 ↑	1 25 z	1 26 ?	1 35 z	1 32 z	1 25 ↓	1 31 z	1 27 z	1 20 z	1 12 z	1 5 ↑	1 8 z
12	1 16 ?	1 16 ?	1 17 ↑	1 6 ?	1 30 ↑	1 43 ↓	1 51 z	1 45 ↓	1 28 ↓	1 26 ↓	1 20 ?	1 17 ?	1 23 z	1 1 z
13	1 16 z	1 19 ↑	1 19 z	1 20 z	1 17 z	1 28 ↑	1 28 z	1 33 z	1 35 ↓	1 18 ↓	1 18 ?	1 16 ?	1 13 z	1 3 z
14	1 37 ‡	1 14 ?	1 16 ↓	1 31 z	1 36 ?	1 43 ↑	2 3 z	2 ?	1 43 ↓	1 34 ↓	1 25 ?	1 19 z	1 7 z	1 5 z
15	1 12 z	1 10 z	1 10 ↑	1 14 ↑	1 20 ↑	1 22 z	1 22 z	1 24 ‡	1 27 z	1 28 ↑	1 28 ‡	1 6 ↓	1 2 z	1 4 ↑
16	1 6 ?	1 8 z	1 11 z	0 59 ↑	1 18 z	1 23 z	1 25 ↓	1 30 z	1 28 z	1 36 ↓	1 31 z	0 57 z	1 7 z	1 11 z
17	0 55 ?	1 8 ↑	0 53 ↓	2 18 ‡	1 59 ↑	1 41 ?	1 53 ↑	2 40 ↑	1 47 ‡	1 38 ‡	1 35 ‡	1 21 ‡	0 51 ↓	0 53 ↓
18	0 28 ?	0 21 ‡	1 7 ‡	1 48 ↑	1 32 ↑	1 59 ↓	2 0 ↓	2 27 ‡	2 5 ↓	1 44 ‡	1 25 ‡	1 35 ↑	1 25 ↑	1 14 ?
19	0 58 ↓	0 49 z	1 11 ‡	1 30 ?	1 17 ?	1 38 ↑	1 57 ?	1 51 ‡	2 15 ↓	1 30 ‡	1 39 ?	1 19 ‡	1 17 ?	1 30 ↑
20	0 49 ?	1 1 ↓	1 1 ‡	1 22 ↓	1 38 ↑	1 45 ↑	1 41 ?	1 41 ?	2 7 ?	1 27 z	1 22 ?	1 17 z	1 15 z	1 2 ↓
21	0 54 ‡	1 9 ?	1 4 ↓	1 16 z	1 29 ↓	1 31 ?	1 37 ↑	1 36 z	1 36 ?	1 35 ↑	1 26 ↓	1 19 ↓	1 10 z	1 10 z
22	0 58 z	1 9 ?	1 14 ‡	1 10 ?	1 52 ↓	1 46 z	1 49 ?	2 31 ‡	2 8 ↓	1 49 ?	1 31 ↓	2 5 ‡	0 53 ‡	0 43 ‡
23	1 0 ↑	1 17 ‡	1 54 ↓	1 30 ‡	1 40 ↓	1 49 z	2 16 ‡	1 50 ↓	1 38 ?	1 45 z	1 39 ‡	1 42 ↑	1 31 ↑	1 15 ↓
24	0 56 z	1 4 ?	1 9 ↑	1 26 ↑	1 26 z	1 45 ?	1 43 ↑	1 46 ‡	1 53 ?	1 38 ↑	1 41 ?	1 25 ↓	1 20 ‡	1 17 z
25	1 10 z	1 15 z	1 14 z	1 23 ?	1 35 ↑	1 36 ↑	1 56 ‡	2 25 ‡	2 27 ↓	1 41 ‡	1 49 ‡	1 25 ?	1 16 ‡	1 25 ?
26	1 50 ↑	1 46 ?	1 19 z	1 28 ‡	1 46 z	1 51 ↓	2 3 ‡	3 0 ‡	2 24 ?	1 31 z	1 44 ?	1 25 ↓	1 20 z	1 18 ?
27	1 15 ↓	0 32 ‡	2 17 ↓	3 51 ‡	2 1 ‡	1 25 ‡	2 51 ‡	1 54 ‡	2 7 ‡	1 48 ‡	2 4 ‡	1 48 ↓	1 23 ↑	1 9 z
28	1 55 ↓	1 17 ?	1 11 ↑	1 44 ↑	1 39 z	1 50 ↑	1 43 ↑	2 28 ?	1 53 ?	1 35 ↓	1 33 ↓	1 29 ↑	1 10 z	1 12 z
29	1 21 ?	1 8 ↑	1 14 ↓	1 25 ?	1 32 z	1 35 ?	1 45 ↓	2 2 ?	1 50 ↑	1 41 ?	1 46 z	1 36 z	1 27 ↓	1 13 z
30	0 38 ?	1 0 ↑	0 47 ‡	1 15 ?	1 46 ↓	2 41 ↑	3 6 ↓	1 30 ↓	2 23 ‡	2 11 ‡	1 32 ‡	1 24 ?	1 24 z	1 19 ‡
Mean -	1 5·1	1 7·5	1 16·5	1 30·2	1 34·8	1 43·6	1 59·0	2 1·2	1 53·3	1 41·1	1 30·2	1 22·6	1 30·0	1 10·1

$\lambda = -115^\circ\ 43'\ 50''$ W. $= -7^h\ 42^m\ 55^s$. Local Mean Time. *May* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 3 ↓	1 7 ↑	0 57 ↓	0 44 ↑	0 57 z	1 5 ⇕	1 12 z	1 16 ↑	1 4 ↑	1 13 ↕	1 16·2	1 45	0 43	1 2
1 8 z	1 6 z	1 7 z	1 0 z	1 7 z	1 8 z	1 3 ↑	1 13 z	1 11 ↑	0 55 z	1 22·7	3 42	0 44	2 58
1 8 ↓	1 4 ?	0 57 z	0 59 ?	0 57 z	1 9 ?	0 51 z	1 8 z	1 12 z	1 9 ?	1 15·5	1 41	0 51	0 50
1 3 ↑	1 4 z	1 3 z	0 54 ?	1 4 z	1 0 z	1 4 z	1 0 ?	0 56 ↓	1 8 z	1 13·7	2 16	0 54	1 22
0 59 z	0 56 ↓	0 58 ↓	0 55 ?	1 6 z	1 9 ↓	0 58 z	1 18 ?	0 29 ↓	0 50 ?	1 11·0	2 26	0 24	2 2
0 58 z	1 1 z	1 4 z	1 6 z	1 6 z	1 7 z	1 5 ↑	1 0 ↓	0 34 ⇕	1 21 ?	1 12·0	2 3	0 17	1 46
1 4 z	1 4 z	1 7 z	1 10 z	1 13 ?	1 12 z	1 9 z	1 8 z	1 7 z	1 8 z	1 14·9	1 43	1 2	0 41
1 5 ↓	1 4 ↑	1 4 z	1 8 z	1 7 ?	1 6 z	1 11 z	1 6 z	1 6 z	1 40 ↑	1 16·8	1 50	0 59	0 51
1 3 ?	1 2 ?	1 5 ↓	1 7 z	1 12 z	1 8 z	1 12 z	1 8 z	1 7 z	1 10 z	1 15·1	1 38	0 52	0 46
1 3 z	1 5 z	1 5 ↑	1 8 z	1 12 z	1 10 z	1 12 z	1 10 z	1 7 z	1 16 ↓	1 14·2	1 36	0 58	0 38
1 6 z	1 5 ?	1 6 ↓	1 10 z	1 2 ↓	1 2 z	1 3 ?	1 2 z	1 2 ?	1 26 ⇕	1 17·1	1 56	1 0	0 56
1 6 z	1 10 z	1 8 z	1 8 z	1 10 z	1 11 z	1 10 ↓	1 10 z	1 11 ↓	1 1 ⇕	1 14·6	1 37	0 50	0 47
1 1 z	0 59 z	0 52 z	0 56 z	0 50 ?	0 48 ?	0 28 ↓	0 48 ?	1 9 ↓	1 6 ↓	1 11·1	2 2	0 22	1 40
1 6 z	1 8 z	1 10 z	1 12 z	1 5 z	1 5 ↕	1 6 ↕	1 6 ?	1 1 ↓	1 0 ⇕	1 15·6	1 58	0 56	1 2
1 10 z	1 11 z	1 7 z	1 10 z	1 4 ?	1 0 z	1 0 z	0 56 z	0 52 z	0 40 ↓	1 16·4	1 52	0 36	1 16
1 8 z	1 8 z	1 10 z	1 9 z	1 12 z	1 12 z	1 15 z	1 13 z	1 10 z	1 9 z	1 16·8	2 58	0 43	2 15
0 59 ?	1 5 ↑	1 10 ↑	1 0 z	1 13 z	1 2 z	1 15 ↓	1 10 z	1 6 z	1 12 ?	1 14·3	2 5	0 50	1 15
1 8 z	1 10 z	1 14 z	1 12 ?	1 16 z	1 15 z	1 8 z	0 58 ↓	0 7 ⇕	1 5 ?	1 14·4	1 38	0 0	1 38
1 13 z	1 15 z	1 12 ↓	1 16 ↑	1 20 z	1 18 z	1 12 z	1 15 ?	1 13 z	1 15 z	1 25·7	2 56	1 3	1 53
1 4 z	1 10 z	1 5 ?	0 59 ↑	0 34 ?	0 19 ↓	0 3 ?	0 32 ⇕	0 22 ↓	1 28 ⇕	1 9·8	1 52	0 2	1 50
1 20 ↕	1 9 ↑	1 5 ↑	1 5 z	0 30 ?	1 1 ↓	0 57 ↓	1 6 ↓	0 45 ↑	−0 15 ⇕	1 32·6	3 32	−0 34	4 6
1 10 ⇕	1 19 ?	1 3 ↓	0 51 ?	0 57 ?	1 9 ↑	0 48 ?	0 55 ?	1 4 ↓	1 11 z	1 17·1	2 30	0 10	2 20
1 6 ↓	1 5 ?	1 4 ?	1 13 ↓	1 10 ?	1 8 z	1 20 ↓	1 19 z	1 11 z	1 6 z	1 22·0	2 44	0 51	1 53
1 5 z	1 0 z	0 57 ⇕	1 6 ↑	1 9 ↓	1 2 ↑	1 11 z	1 7 z	1 7 ⇕	1 6 ⇕	1 18·5	2 9	0 43	1 26
1 9 z	1 4 ?	1 8 ?	0 53 z	1 2 z	1 3 ↑	1 8 z	1 9 z	1 5 ?	1 20 ↕	1 17·0	1 47	0 50	0 57
1 11 ↓	1 9 ?	1 10 ?	0 53 ?	1 15 z	1 7 z	1 12 z	1 9 ↑	1 13 ?	0 57 ⇕	1 20·6	2 28	0 47	1 41
1 13 ↓	0 57 ↓	0 36 ?	0 58 ?	1 2 ↓	0 59 ?	1 10 ↓	1 6 z	1 2 z	1 4 z	1 18·1	2 28	0 34	1 54
1 6 z	1 7 ↑	0 53 ?	1 6 z	1 13 ?	1 7 z	1 14 ↓	1 0 ?	1 5 ↑	0 51 ?	1 18·2	3 27	0 50	2 37
1 14 z	1 10 z	1 12 z	1 6 z	1 0 ?	1 6 z	1 3 z	1 12 z	1 14 z	1 11 z	1 22·9	2 22	0 38	1 44
1 0 ↑	1 0 ?	0 58 ?	0 55 ↑	0 57 ?	0 58 z	0 47 ?	0 34 ⇕	0 24 ⇕	0 39 ?	1 12·1	2 6	0 10	1 56
1 8 z	0 58 z	1 0 z	1 1 z	0 56 ↑	1 15 ?	1 7 ⇕	0 31 ⇕	1 12 ⇕	1 13 z	1 14·5	1 56	0 31	1 25
1 6·4	1 5·5	1 3·4	1 2·8	1 4·0	1 4·5	1 3·0	1 4·5	0 59·0	1 5·0	40 16·8	42 42	38 26	4 16

$\lambda = -115^\circ\ 43'\ 50''$ W. $= -7^h\ 42^m\ 55^s$. *June* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 4 ↓	1 1 z	0 57 z	0 46 ↓	0 46 ↑	0 56 ⇕	0 59 z	1 40 ↑	0 36 ⇕	0 52 ?	1 15·3	2 26	0 20	2 6
1 17 ?	1 6 ?	1 4 ?	1 7 z	0 59 ?	1 14 ?	1 9 z	1 4 ↑	0 54 ?	0 50 ↓	1 24·1	5 13	0 27	4 46
1 11 ↑	1 8 ↑	1 12 ?	1 5 ?	1 10 ?	1 15 ↓	1 13 ?	1 11 ?	0 49 ?	0 58 ↓	1 19·3	2 29	0 38	1 51
1 5 z	1 12 z	1 11 z	1 12 z	1 12 z	1 16 z	1 17 z	1 18 z	1 17 z	1 16 ?	1 20·1	2 5	1 5	1 0
1 11 ↓	1 9 ↓	1 10 z	1 8 ?	1 13 z	1 9 z	1 10 z	1 10 ↓	1 13 ↓	0 53 ↑	1 17·6	1 39	0 47	0 52
1 3 ?	1 7 ↑	0 55 ?	0 52 ?	0 53 ↓	1 18 ↑	1 13 ?	0 59 ?	0 53 ?	0 54 ↓	1 24·7	2 57	0 21	2 36
1 11 z	1 8 ↓	1 1 ⇕	1 13 z	1 2 ↓	0 58 ?	1 0 ↑	1 3 ?	1 11 ↑	1 11 ?	1 19·3	1 58	0 57	1 1
1 7 z	0 57 z	0 52 ?	1 7 z	1 2 ↑	1 9 z	1 2 ↑	0 46 z	0 57 ↑	1 1 ↓	1 19·5	2 33	0 46	1 47
1 11 z	1 6 ↓	1 5 z	1 7 ↑	1 17 z	1 19 z	1 19 z	1 18 z	1 15 z	1 13 z	1 24·8	2 42	0 29	2 13
1 2 ↓	1 1 ↓	1 1 z	0 57 ↓	0 40 ?	0 51 z	0 45 ↑	0 52 ?	0 54 ↑	0 43 ⇕	1 13·8	1 47	0 38	1 9
1 11 ↓	1 10 z	1 12 z	1 13 ?	1 15 z	1 18 z	1 17 z	1 17 z	1 12 z	1 13 z	1 15·7	1 35	0 53	0 42
1 9 ?	1 13 ↓	1 13 z	1 13 z	1 15 z	1 18 z	1 13 z	0 50 ⇕	0 52 ?	1 15 ?	1 17·9	1 51	0 38	1 13
1 11 ?	1 7 ↑	1 10 z	1 7 ↓	1 2 ⇕	1 10 ↑	1 4 ↑	1 1 z	1 16 ⇕	0 51 ⇕	1 14·3	1 39	0 43	0 56
1 5 z	1 3 z	1 4 z	1 4 ⇕	1 10 z	1 9 z	1 14 z	1 10 z	1 12 z	1 11 z	1 21·4	2 11	0 5	2 6
1 3 ↑	1 6 ?	1 4 z	1 6 z	1 8 z	1 9 z	1 14 z	1 12 z	1 10 z	1 9 z	1 12·9	1 28	1 2	0 26
1 2 z	0 59 z	0 59 ↓	0 47 ↑	0 17 ⇕	−0 9 ↑	−0 1 ↑	0 36 ⇕	0 26 ?	0 30 z	0 58·2	1 38	−0 49	2 27
0 39 ⇕	1 36 ⇕	0 42 ⇕	0 50 ⇕	1 15 ⇕	0 52 ↑	0 54 z	1 46 ⇕	1 36 ↓	1 31 ↓	1 23·0	3 36	0 2	3 34
0 54 ⇕	1 3 ?	1 1 ⇕	0 59 z	0 51 ?	1 25 ?	0 52 ↓	0 36 ↑	0 25 ⇕	0 38 ?	1 14·8	2 32	0 12	2 20
1 4 ⇕	0 59 ↓	0 54 z	0 58 z	0 57 z	0 58 ↑	1 10 ↑	1 11 ↓	0 40 ?	0 59 ↓	1 16·3	4 0	0 38	3 22
0 59 ↕	0 52 ⇕	0 44 ↓	0 58 z	0 52 z	0 52 ?	1 2 ↑	0 41 ↑	1 4 ↓	1 3 z	1 11·5	2 8	0 32	1 36
1 2 z	1 6 z	1 5 ?	1 2 z	1 12 z	1 16 z	1 16 z	1 14 z	1 12 z	1 9 z	1 16·1	1 38	0 52	0 46
1 2 ?	0 57 z	0 50 ↓	0 38 ⇕	0 49 ↑	0 20 ?	0 41 ?	0 46 ↓	1 44 ⇕	1 14 ↕	1 16·6	2 50	0 19	2 31
1 13 ↑	1 8 ⇕	0 51 ?	0 41 z	1 3 ⇕	0 54 ↕	0 53 ↓	1 6 ↓	0 48 ↑	1 9 ⇕	1 21·3	2 20	0 40	1 40
1 8 z	1 4 z	1 2 ↓	1 4 ↑	1 10 ↕	1 17 z	1 14 z	1 10 z	1 13 ↑	1 11 z	1 20·1	1 54	0 56	0 58
1 18 ↓	1 12 ↓	0 56 ↑	1 8 ?	1 13 z	1 15 z	1 17 z	1 18 z	1 13 ↓	1 26 ⇕	1 27·2	2 30	0 52	1 38
1 2 ⇕	1 11 ⇕	1 6 ⇕	1 6 z	1 9 ↑	1 8 z	0 58 ↓	0 54 ?	0 58 ↓	0 50 ?	1 27·8	3 9	0 49	2 20
1 12 z	1 8 ↑	1 1 ↑	0 54 ?	1 10 ↑	1 6 ↓	0 15 ⇕	0 38 ⇕	0 59 ↓	1 10 z	1 29·9	3 58	0 11	3 47
1 12 z	1 12 ↑	1 15 ?	1 13 ?	1 12 ↓	1 20 z	1 10 z	1 16 z	1 15 ↓	0 58 z	1 26·7	2 29	0 58	1 31
1 8 z	1 13 z	1 8 z	1 2 z	1 5 ?	1 12 ↑	1 16 ↓	0 38 ⇕	0 37 ↕	0 32 ↓	1 18·6	2 3	0 25	1 38
1 25 ↓	0 52 ↓	1 4 ⇕	0 4 ⇕	0 53 ⇕	0 59 ↓	0 29 ⇕	1 21 z	1 13 ↕	0 53 ?	1 15·4	3 38	0 4	3 34
1 6·7	1 6·2	1 2·3	0 59·4	1 2·4	1 5·1	1 1·2	1 4·1	1 2·1	1 1·4	40 19·0	44 13	38 11	6 2

July 1883. 38°+ $\Phi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	2 35	1 2	2 7	2 17	2 3	2 31	3 11	4 1	3 49	3 7	2 59	2 35	2 27	2 21
2	2 7 z	1 57 z	2 9	2 19 ?	2 17	2 19 ?	2 11	2 27 ?	2 30 ?	2 28	2 44	2 17 ?	2 7	2 6 z
3	1 58 ?	2 36	2 29	2 28	2 42	2 55 z	3 3 z	2 58	2 56	2 31	2 21 ?	2 19	2 13 z	2 4 z
4	1 53 ?	1 47 ?	1 48 ?	2 21	2 35	2 49 z	3 11 ?	2 52 z	2 34	2 26	2 20	2 17	2 7 z	2 5 z
5	2 15	2 11 ?	2 18 ?	2 11	2 39	2 54 ?	3 2	3 23	3 20 ?	3 0 ?	2 20 z	2 15 z	2 7	2 12 z
6	1 44	2 13 z	2 7 z	2 34 z	2 26 z	2 33	2 28 z	2 28	2 29 z	2 38 z	2 27 z	2 18	2 11	2 8 z
7	2 6 z	2 11 z	2 20 z	2 27 z	2 33	2 36	2 29 z	2 53 ?	3 3	3 35	3 7	2 33	2 3	2 14
8	1 39	1 41 ?	2 0	1 58 ?	2 17	2 30	3 22	3 5	3 18	2 29	2 32	2 8 ?	2 6 ?	2 10 ?
9	2 13 z	2 9	2 21 z	2 23	2 21	2 34	2 33	2 31	2 31 z	2 28	2 22 ?	2 27	2 14 z	2 9 z
10	2 23 ?	2 43	2 43 ?	2 15	2 22	2 37	2 39 ?	2 39	2 32	2 29 z	2 28	2 14	2 33	2 20
11	2 15 z	2 19	2 23	2 24	2 33 z	2 30 ?	2 27 ?	2 38	2 34 ?	2 38	2 17 ?	2 10	2 13	1 54 ?
12	2 17	2 25	2 20	2 17 ?	2 16	2 36	2 45 z	2 40	2 31 z	2 29 z	2 25	2 24	2 23 z	2 20
13	2 24	2 15	2 18	2 42	2 27 ?	2 45	3 47	3 28	2 58	2 33 ?	2 23 z	2 17 z	2 13 z	2 21 ?
14	2 11	2 2	1 42	2 5	3 17	2 50	3 26	5 9	3 10	2 26 ?	2 20	2 16 ?	2 11	2 9
15	2 7 ?	2 10	2 22	2 22	2 28	2 33	2 40	3 32	5 3	4 8	2 42	2 20	2 19 ?	2 24
16	1 59 ?	2 10 z	2 9	2 27 ?	2 32	2 45	3 5 ?	4 2	3 24 ?	3 5	2 32 z	2 17	2 3 ?	2 12 ?
17	2 5	2 2	2 15 z	2 15 ?	2 28 z	2 36	2 56	2 51	2 33	2 27	2 26 z	2 14 ?	2 14	2 10 z
18	2 5	2 21	2 26 ?	2 32	2 27	3 53	3 12	2 45	2 12	2 41	2 56	3 10	1 36 z	2 7 ?
19	2 17	2 2	2 15 ?	2 11	2 31	2 34 z	2 31	2 46 ?	2 44 z	2 27	2 34 ?	2 14 z	2 24 z	2 31
20	2 6	1 55	2 14 z	2 21 z	2 33 z	2 41 z	2 45	2 36	2 34 ?	2 32	2 22	2 16	2 14 z	2 6
21	2 3	2 10 z	2 14 z	2 16 z	2 23 z	2 22 z	2 26 z	2 31 z	2 32 z	2 30 z	2 26 ?	2 15	2 8 z	2 5 z
22	2 12 z	2 16 z	2 19 z	2 21 z	2 23 z	2 27 z	2 33 z	2 35	2 33	2 27 z	2 23 z	2 19 ?	2 17 ?	2 11
23	2 29	2 18 z	2 15	2 21 z	2 19 z	2 26 z	2 30 z	2 32 z	2 33	2 33 z	2 32 z	2 20 z	2 9	2 4 z
24	1 42	1 50	2 8 z	2 44	2 26 z	2 39 ?	2 57	3 18	4 23	3 21 z	2 25	2 10	2 3	2 10 ?
25	2 3	2 4 ?	2 16	2 28 ?	2 35	2 51	3 9	2 52 z	2 32 ?	2 27	2 12	2 13 z	2 11 z	2 13 z
26	2 14 z	2 8 z	2 14 z	2 42	2 51	3 13 z	2 53	3 10 z	3 16	2 54	2 41	2 19	2 24	2 23
27	2 13 ?	2 14 z	2 16 z	2 17	2 2 z	2 39	2 47	3 24	2 38	2 25 z	2 13	2 15 z	2 13 z	2 10 z
28	2 14 z	2 15 z	2 19 z	2 21 z	2 26	2 33	2 49 z	2 49 z	2 33 z	2 30 z	2 21 z	2 14	2 13 z	2 12 z
29	1 59	2 19	2 23	2 24 z	2 27 z	2 31 z	2 29 z	2 30 z	2 28	2 24	2 25 z	2 14 z	2 4 z	2 8 ?
30	2 14	2 16 ?	2 17	2 11	3 59	1 44	3 18 ?	3 10	3 11	4 38	3 20	3 49	2 39	2 17
31	1 55	1 58	2 2	2 23	2 23	2 55	3 56	4 5	3 15	4 55	4 11	2 15 ?	2 16	1 55 ?
Mean -	2 7·6	2 7·7	2 14·5	2 21·8	2 31·0	2 39·4	2 53·2	3 3·2	2 56·4	2 49·7	2 34·4	2 22·1	2 12·7	2 11·3

August 1883. 39°+ $\Phi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	0 56	2 24	2 28	1 26	0 48	1 18 z	1 47	2 16	2 19	1 43 z	1 20 ?	1 8	1 31	1 24
2	1 6 ?	1 13	1 23	1 30	1 37	1 39 z	1 43 z	1 39	1 35 z	1 31	1 31 ?	1 21 z	1 20 z	1 13 z
3	1 4 z	1 22	1 27	1 30	1 30 z	1 31 z	1 36 z	1 38	1 33 z	1 32 z	1 28 z	1 23	1 25 z	1 18 z
4	1 15 z	1 14 z	1 17 z	1 18 z	1 31 z	1 45 ?	1 38 z	1 34	1 33	1 29	1 28 z	1 20 z	1 12 z	1 9 z
5	1 19 ?	1 11 ?	1 20 z	1 25 z	1 28 ?	1 48	2 34 z	2 38	1 38	1 37	1 30 z	1 29 z	1 7	0 59
6	1 2	0 44	1 54	0 58	1 2	1 14	2 7 ?	3 22	2 54	1 35 z	1 31 ?	1 28	1 16	1 33
7	0 58	1 18 ?	1 15 z	1 13	1 16	1 36	2 24	2 13	1 55	1 28 z	1 12	1 6 z	1 18 z	0 55
8	1 25 z	1 19 z	1 10	1 17	1 6 z	1 19 z	2 3 z	1 42	1 40 z	1 29	1 21	1 9	1 16	1 16 z
9	1 18 z	1 18 z	1 19	1 19	1 33	1 30	1 37 z	1 38	1 33 z	1 30 z	1 22 z	1 18 z	1 13	1 15
10	1 17 z	1 17 z	1 20 z	1 19 z	1 27 z	1 27 z	1 33 z	1 36 ?	1 37 z	1 31	1 7	1 12 z	1 12	1 12 ?
11	1 18 z	1 9	1 34	1 35 z	1 37	2 2	2 30 ?	1 56 ?	1 46	1 33	1 15 ?	1 16 z	1 7	1 0
12	1 11 ?	1 13	1 19 z	1 26 z	1 32 z	1 36	1 39 z	1 55 z	1 56 ?	1 40	1 21	1 13 z	1 9	1 10 z
13	1 13	1 16	1 29	1 39	1 34 z	1 31 z	1 40 z	1 41	1 42 ?	1 29	1 27 z	1 23	1 17 z	1 8 z
14	1 18	1 10	1 4 ?	1 38	1 22	1 38	1 44	1 44	1 45 ?	1 25 ?	1 44 z	1 25 z	1 5	1 3 ?
15	1 18 z	1 16	0 56	1 23	1 36	1 39	1 38 z	1 37	1 30	1 20 ?	1 12 z	1 10	1 9 z	1 13 z
16	1 19 z	1 19 z	1 19	1 24 z	1 22 z	1 29 z	1 33 ?	1 31	1 28 z	1 26	1 18 z	1 17 z	1 15 z	1 14 z
17	1 20 z	1 19 z	1 19 z	1 21 ?	1 27 z	1 38 z	1 38 z	1 37 z	1 37 z	1 33 z	1 26 z	1 19 z	1 12	1 2 ?
18	1 12	1 23	1 15 ?	1 19	1 38	2 39	2 42	2 17	2 53	1 55	1 40	1 42 ?	1 11	1 25
19	1 15 z	1 19 z	1 13 z	1 18 z	1 36	1 41 z	1 34 z	1 37 z	1 34 z	1 32 ?	1 24 z	1 15 z	1 12 z	1 14 ?
20	1 9	1 11 z	1 21	1 22	1 24	1 39	1 50 ?	1 34	1 30	1 31	1 29	1 18	1 7 z	1 6
21	1 26 ?	1 17 z	1 22	1 20	1 30 z	1 43 z	1 50	1 45 z	1 31	1 37 ?	1 25	1 16 z	1 7 z	1 12 ?
22	1 10 z	1 8	1 14	1 26	1 32	1 48 ?	1 30	1 44 ?	1 31	1 42	1 29	1 6 ?	1 30 z	1 22 z
23	1 12 z	1 11 z	1 23 z	1 41	1 23	1 35	1 29 ?	1 59	1 46 ?	1 40 z	1 37	1 9 ?	1 17	1 10
24	1 4	1 38	2 3	1 56 ?	1 34	1 34	1 46	1 47 ?	1 40	1 19	1 14	1 19 z	1 12 z	1 6 ?
25	0 57 ?	1 18	1 20 z	1 20 z	1 24	1 30	1 36	1 42 z	1 35 ?	1 32 z	1 21	1 18 z	1 13 z	1 10 z
26	1 8	1 21 z	1 22 z	1 24 z	1 28 z	1 35	1 36 z	1 33 z	1 30 z	1 23 z	1 17 z	1 12 z	1 9 z	1 8 z
27	1 6	1 19 z	1 16 z	1 16 z	1 20 z	1 20 z	1 22 z	1 30 z	1 36 z	1 42 z	1 27	1 15	1 14 z	1 14 z
28	1 1	1 19	1 16 z	1 14	1 32 z	1 38 z	1 43 z	1 42 z	1 36	1 33	1 12 z	1 12 z	1 12 z	1 7
29	1 16 z	1 18 z	1 10 z	1 42 ?	2 2	1 48	1 41 z	2 1	1 24 z	1 29 z	1 20	1 9 z	1 3 z	1 5 z
30	1 8 z	1 14 z	1 15 z	1 18 z	1 18 z	1 28	1 31 z	1 44 z	1 35	1 30 z	1 21 z	1 11 z	1 9 z	1 6
31	1 13 z	1 15 z	1 17 z	1 19 z	1 24 z	1 24 z	1 22 z	1 30	1 23 ?	1 31	1 14 z	1 11 z	1 6 z	1 7 z
Mean -	1 11·4	1 17·8	1 22·6	1 24·4	1 26·9	1 36·8	1 46·3	1 49·7	1 42·7	1 32·5	1 23·3	1 16·5	1 13·1	1 10·8

$\lambda = -115° 43' 50''$ W. $= -$ 7h. 42m. 55s. Local Mean Time. *July* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 25 ↓	1 47 ↑	1 55 ↓	1 53 z	1 50 ↕	0 46 ↓	1 42 ↓	1 51 ↕	1 30 ↕	2 1 ↓	2 16·9	4 1	0 25	3 36
2 7 ↑	2 5 z	2 7 z	2 4 z	1 59 ↓	2 11 z	2 5 z	2 4 ↓	2 7 ↕	1 55 ↓	2 11·8	2 51	1 50	1 1
1 57 z	1 56 ↕	1 53 ↓	1 57 z	2 1 ↕	2 0 ↓	2 6 ?	2 42 ↑	2 6 ?	1 52 ↑	2 20·1	3 3	1 49	1 14
2 11 z	2 5 ↓	2 8 ?	2 13 ↓	2 21 z	2 5 z	2 12 z	1 59 ↓	1 59 ↑	2 12 ↕	2 16·2	3 14	1 45	1 29
2 5 ?	2 4 ?	2 2 ↕	1 41 ↓	1 46 ?	2 3 ↑	1 57 ↕	1 42 ↑	2 2 ↕	1 53 ↓	2 18·4	3 27	1 33	1 54
2 8 z	2 9 z	1 50 ↑	1 57 ↑	2 4 ↑	2 11 z	2 15 z	2 10 z	2 3 ↓	2 8 z	2 14·1	2 38	1 39	0 59
2 9 z	2 0 ↓	2 3 z	2 3 ↑	2 6 z	2 7 z	2 11 ↑	1 57 ↓	1 10 ↕	1 16 ↑	2 18·0	3 41	0 59	2 42
1 56 ↕	1 57 ?	2 1 z	2 1 ↑	1 54 ?	2 6 z	2 9 z	2 10 z	2 13 ?	2 15 z	2 14·9	3 44	1 28	2 16
2 3 ?	2 3 z	2 10 ↑	1 58 ↓	2 0 ↑	1 44 ↑	1 57 ↕	2 14 ?	1 43 ↓	2 26 ↕	2 13·9	2 45	1 1	1 44
2 10 ↓	2 8 ?	2 2 ?	1 57 ?	2 2 ↕	1 49 z	2 13 z	2 13 z	2 13 z	2 7 ↑	2 19·6	2 57	1 45	1 12
2 25 ?	2 18 ↓	2 39 ?	1 59 ?	2 9 ↕	2 12 ↕	2 2 ↕	2 12 ↑	1 59 ↑	2 16 ↓	2 18·6	3 13	1 38	1 35
2 15 z	2 12 z	2 16 ?	2 16 z	2 18 ↓	2 19 ?	2 22 ?	2 14 z	1 51 ↕	2 0 ↓	2 20·5	2 45	1 45	1 0
2 20 ↓	2 12 z	2 7 z	1 54 ?	2 7 z	2 8 ?	2 15 z	2 13 z	2 13 z	2 8 ↓	2 26·2	4 21	1 52	2 29
2 8 z	2 7 z	2 9 z	2 9 z	2 13 z	2 15 z	2 17 ?	2 15 z	2 11 ↓	2 37 ↕	2 29·0	5 19	1 32	3 47
2 21 ↓	2 4 z	2 5 ?	2 4 ?	1 38 ?	1 53 ↑	1 47 ↑	1 37 ↑	1 32 ?	1 54 z	2 25·2	5 3	1 8	3 55
2 5 ↑	1 55 ↑	2 1 ↕	1 54 z	1 56 ?	1 40 ?	1 53 z	1 52 ?	1 53 ?	1 52 ↑	2 19·3	4 7	1 2	3 5
2 4 z	2 6 z	2 7 ↕	2 11 z	2 9 ↑	2 0 ↓	2 22 ↓	2 5 ↓	2 8 z	1 54 z	2 16·6	2 57	1 54	1 3
2 8 ?	1 57 ↓	1 25 ↑	1 23 ↕	1 37 ↕	2 31 z	1 51 z	1 53 ?	2 27 ↑	2 1 z	2 19·0	3 57	1 19	2 38
1 42 ↑	1 51 z	1 50 ↑	1 47 ↓	2 2 ↕	1 52 ↓	2 4 z	1 56 ↕	2 6 ?	2 12 ?	2 13·5	2 49	1 34	1 15
2 4 z	2 2 z	2 7 z	2 7 z	2 11 z	2 14 z	2 15 z	2 12 z	2 12 z	1 51 ↕	2 16·3	2 47	1 46	1 1
2 2 z	2 2 z	2 7 z	2 10 z	2 9 z	2 12 z	2 16 z	2 14 z	2 14 z	2 14 z	2 15·0	2 32	2 0	0 32
2 7 z	2 4 z	2 6 z	1 56 z	2 3 ↕	2 6 z	2 8 z	2 8 z	2 15 ↕	2 14 ?	2 16·0	2 36	1 54	0 42
2 2 z	2 4 z	2 5 z	2 0 ?	1 54 z	1 51 z	1 55 ↓	1 45 z	1 41 ↕	1 46 ↕	2 11·0	2 47	1 40	1 7
2 8 z	2 10 z	1 39 z	1 40 ↓	1 55 ↕	1 38 z	1 46 ↕	2 2 z	1 54 z	2 2 ?	2 17·9	4 30	1 37	2 53
2 8 z	2 7 z	2 11 z	2 8 z	2 7 z	2 13 z	2 11 z	2 11 z	2 4 z	2 10 ?	2 19·1	3 10	2 2	1 8
2 10 ↓	2 7 z	2 7 ↓	2 8 ↑	2 8 ↓	2 8 z	2 10 ↓	1 28 ↕	1 27 ↓	2 4 ↑	2 23·3	3 19	1 24	1 55
2 11 z	2 11 z	2 14 z	2 15 z	2 16 z	2 16 z	2 16 z	2 15 z	2 15 z	2 15 z	2 20·4	3 26	2 2	1 24
2 10 z	2 12 z	2 14 z	2 17 z	2 11 ↓	2 14 z	2 15 ?	2 12 ↓	2 7 z	1 53 ↕	2 18·9	2 50	1 48	1 2
2 10 z	2 10 ↑	1 59 ?	0 36 ↕	−0 2 ↕	0 57 ↓	1 20 ↑	0 52 ↕	1 28 ↕	1 31 ↕	1 54·3	2 32	−0 2	2 34
2 17 ↕	1 51 ↓	1 45 ↕	1 48 ↓	1 57 z	2 7 ↕	1 31 z	1 40 ↕	1 45 z	1 42 ↕	2 28·6	6 14	1 18	4 56
1 54 ↑	2 3 ↕	2 36 ↕	2 4 ↕	2 3 ↕	0 7 ↑	0 21 ↓	2 6 ↓	2 16 ↓	2 5 ↓	2 25·0	5 16	−0 30	5 46
2 7·8	2 3·8	2 3·9	1 57·1	1 58·2	1 56·0	2 0·1	2 0·8	1 58·2	2 1·5	40 17·9	44 14	37 30	6 44

$\lambda = -115° 43' 50''$ W. $= -$ 7h. 42m. 55s. *August* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0 58 ↓	1 10 z	0 53 z	1 20 ↓	0 35 ↑	1 32 ↕	0 37 ?	0 53 ↕	0 47 ↕	1 12 ↕	1 21·9	4 4	0 29	3 35
1 9 ?	1 10 ↑	1 14 ↓	1 9 ?	1 4 ?	1 11 ↓	1 15 ↑	1 18 z	1 16 z	1 11 z	1 20·8	1 46	1 2	0 44
1 11 z	1 8 z	1 7 z	1 9 z	1 11 ?	1 13 z	1 14 z	1 16 ↑	1 11 z	1 22 ↕	1 20·8	1 39	1 4	0 35
1 9 z	1 9 z	1 12 z	1 8 ?	1 15 z	1 14 z	1 16 z	1 15 z	1 8 z	1 11 z	1 19·2	1 47	1 6	0 41
0 53 z	1 8 z	1 2 z	0 54 z	0 54 z	0 53 z	0 49 z	0 53 z	0 57 ↓	0 52 ↑	1 18·3	2 44	0 37	2 7
1 31 ↓	1 2 z	1 9 z	0 59 ↑	1 7 z	1 8 z	1 10 z	1 35 z	1 2 ↕	0 55 ↕	1 25·8	3 45	0 16	3 29
1 6 ?	1 2 z	0 35 ↓	0 51 z	0 51 ↕	1 2 z	1 8 ↕	1 14 ↕	1 14 ↑	1 20 ↕	1 16·3	2 36	0 31	2 5
1 15 z	1 19 z	1 19 z	1 17 z	1 18 z	1 16 z	1 16 z	1 13 z	1 51 ↕	1 5 ?	1 21·7	2 4	0 58	1 6
1 12 z	1 14 z	1 16 z	1 12 z	1 11 z	1 12 z	1 15 z	1 14 z	1 15 z	1 18 z	1 20·1	1 40	1 11	0 29
1 8 ?	1 9 z	0 56 z	1 2 ↑	1 6 ↑	0 52 ↕	0 51 z	1 46 ↕	0 59 ↓	0 47 ↕	1 14·3	1 53	0 32	1 21
1 8 ↑	1 10 z	1 10 z	1 10 ↓	1 10 ↑	1 13 ?	1 20 z	1 14 z	1 15 z	1 12 z	1 24·2	2 32	0 56	1 36
1 6 z	1 9 ↑	1 7 z	1 14 z	1 15 z	1 15 z	1 14 ?	1 12 z	1 10 z	1 16 z	1 20·8	1 58	1 6	0 52
1 8 ?	1 8 z	1 14 z	1 16 z	1 15 z	1 16 z	1 8 z	1 4 z	1 3 z	1 1 ?	1 20·1	1 46	1 0	0 46
0 50 ↑	1 1 ?	0 49 ↑	1 5 z	1 5 ↓	0 57 ↕	1 20 ↕	1 9 ?	1 11 z	1 14 ?	1 16·9	1 46	0 47	0 59
1 12 z	1 15 z	1 16 z	1 17 z	1 16 z	1 18 z	1 16 z	1 16 z	1 18 z	1 18 z	1 19·1	1 39	0 50	0 49
1 14 z	1 15 ↑	1 16 ↑	1 14 z	1 14 z	1 15 z	1 17 z	1 18 z	1 18 z	1 21 z	1 19·8	1 34	1 14	0 20
1 10 ↓	1 14 ↑	1 16 ↑	1 15 ↓	1 18 z	1 18 z	1 23 ↕	1 18 z	1 18 ?	0 52 ?	1 20·4	1 38	0 50	0 48
1 46 z	0 59 ↑	0 51 ↓	0 53 z	0 36 ↕	1 4 ↕	0 58 ↑	1 7 ↑	1 10 ↕	1 11 ↑	1 29·4	3 14	0 19	2 55
1 4 ↓	1 7 ↓	1 7 z	1 9 z	1 5 ?	1 6 z	1 19 z	1 15 z	1 32 ↑	1 16 ↕	1 19·3	3 3	1 2	2 1
1 9 z	1 13 z	1 11 ↑	1 14 z	1 17 z	1 17 z	1 15 z	1 20 ↕	1 13 ?	1 10 ↓	1 19·6	1 51	1 3	0 48
1 11 z	1 11 ?	1 6 ↑	1 7 ?	1 13 ↑	1 15 ↑	1 14 ↑	1 12 z	1 7 ↓	1 2 z	1 20·0	1 54	1 2	0 52
0 57 z	1 13 z	1 2 ↕	1 7 ↕	1 0 ↑	1 15 z	1 10 z	1 6 ↑	1 1 ↓	1 8 z	1 18·0	1 50	0 52	0 58
1 4 z	1 13 z	0 59 ↕	1 10 ↑	1 9 ?	1 11 z	1 18 ↑	1 8 ↓	1 2 ↕	1 21 ↕	1 20·3	2 2	0 54	1 8
1 5 z	1 6 ↓	1 13 z	1 15 z	1 12 z	1 16 z	1 12 z	1 16 ?	1 17 ↓	1 10 ↑	1 23·1	2 22	0 23	1 59
1 13 ↑	1 15 z	1 18 z	1 19 z	1 19 z	1 18 z	1 16 z	1 18 z	1 17 z	1 10 ↕	1 20·0	1 42	0 55	0 47
1 10 z	1 14 z	1 17 z	1 17 z	1 15 z	1 14 z	1 13 ↑	1 11 z	1 5 ↓	1 3 ?	1 17·7	1 36	1 2	0 34
1 14 z	1 13 z	1 15 ↑	1 14 z	1 13 z	1 14 z	1 13 ↑	1 12 z	1 12 z	1 12 z	1 17·9	1 43	1 6	0 37
1 3 z	1 10 z	1 14 z	1 15 ↓	1 11 z	1 9 z	1 10 z	1 8 z	1 12 ↑	1 14 z	1 17·6	1 44	0 59	0 45
0 54 ↕	0 53 ↑	1 9 ↕	0 49 z	1 6 z	1 10 z	1 5 ↓	1 3 z	1 20 ↕	1 3 z	1 17·5	2 6	0 48	1 18
1 4 z	1 11 ↓	1 10 z	1 10 z	1 10 z	1 10 z	1 12 z	1 12 z	1 12 z	1 12 z	1 16·3	1 44	1 3	0 41
1 8 z	1 6 z	1 7 z	1 7 z	1 9 z	1 10 z	1 5 z	1 5 ↓	1 10 ↕	1 6 ↑	1 13·7	1 35	1 2	0 33
1 8·5	1 9·3	1 7·4	1 9·0	1 7·7	1 11·4	1 10·6	1 12·9	1 11·7	1 9·2	40 19·7	43 4	39 16	3 48

September 1882. 0·07000+ (C. G. S. Units). $\varphi = +62^\circ\,38'\,52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1														
2														
3														
4														
5	695 ↑	478 z	689 ↑	529 ?	439 ↑	693 ↓	734 ↓	649 z	626 z	660 z	651 ↑	681 ↓	775 ↓	761 ↓
6	724 z	720 z	589 ↕	459 ?	414 ↓	500 ↕	529 ↕	550 ↕	622 z	601 ↕	645 z	649 ?	691 z	691 ↑
7	660 ↑	685 ↓	267 ↑	586 z	668 ↑	656 ↓	705 ↓	703 z	697 z	689 z	678 z	689 z	689 z	707 z
8	474 ↓	416 ↑	414 z	716 ↑	687 z	681 ↑	710 z	714 z	695 z	679 ↑	691 ↕	683 z	689 z	687 ↑
9	837 z	837 z	839 z	835 z	841 z	837 z	841 z	1025 z	1101 ↑	1029 z	1015 ↕	678 z	683 z	658 ↕
10	567 ↕	574 ?	637 z	628 ↑	557 z	588 ?	563 ↓	616 ↓	628 z	632 ↕	635 ↕	628 z	624 z	616 ↓
11	651 ↓	647 ?	630 ↓	633 z	588 ↓	603 z	597 z	603 ↑	607 z	629 ?	516 ↓	597 ?	705 z	647 z
12	662 z	651 ↓	649 z	622 ↓	639 ↓	677 ↕	589 ↕	628 ↕	656 ↕	588 ↓	499 ?	649 ↑	730 ↓	672 ?
13	344 z	599 ↑	643 ↕	618 z	647 ↓	570 ↑	578 ↕	639 ↕	599 ↕	601 ↕	550 ↕	641 ↓	693 z	757 ↓
14	677 ↓	484 ?	586 ↕	689 z	658 ↓	610 ?	540 ↓	493 ↕	685 z	664 ?	653 ↕	651 z	678 ↕	689 ?
15	326 ↕	601 ↕	584 ↓	533 ↕	576 ↑	612 z	652 ↕	697 z	681 z	660 z	645 z	651 ↕	654 ↕	639 ↓
16	653 z	649 z	649 z	656 z	656 z	657 ↓	654 ↓	649 ↑	656 z	653 z	637 z	630 z	628 z	656 z
17	653 ↑	677 z	654 z	633 ↓	595 z	605 ↑	676 ?	660 z	616 z	620 z	624 z	624 z	633 z	654 z
18	662 z	649 z	660 z	656 z	658 z	654 z	635 ↕	603 ↕	591 ↑	591 z	607 z	651 ↑	605 ↓	597 z
19	662 z	676 z	666 z	668 ↑	664 z	681 ↑	599 z	672 ↕	643 z	635 ↓	639 ?	632 z	632 z	643 z
20	632 ?	632 ↕	643 ?	645 ↓	557 ↕	652 ↕	631 ?	643 ↕	660 z	654 z	651 z	643 z	658 z	701 z
21	651 ↕	630 ?	672 ↑	691 ?	670 ?	668 z	666 z	664 z	653 ↑	647 ↓	645 z	633 z	643 z	645 z
22	570 ↓	578 ↓	653 z	651 ↓	647 z	630 z	639 z	651 z	645 z	641 z	639 z	654 z	649 z	639 ↕
23	677 z	668 z	660 z	656 z	561 ↕	379 ↕	333 ↕	424 ↕	614 ?	614 ↑	624 z	633 z	647 z	645 z
24	676 z	672 z	664 z	668 z	672 z	641 ↑	676 ↓	664 z	674 z	664 z	654 z	645 z	656 z	662 z
25	691 ↑	316 ↕	516 ↕	559 ↓	626 ?	654 ?	484 ↑	607 ↑	500 ?	620 ↑	643 ?	641 ↑	707 ?	716 ?
26	407 ↕	523 ↕	614 z	633 z	628 ↑	662 z	664 ↕	664 z	654 z	653 z	649 z	647 z	654 z	685 ↕
27	618 z	618 ↓	584 z	599 ?	536 ↓	500 ↑	607 ↑	703 z	662 ↓	674 ?	666 z	666 z	668 z	697 ↑
28	506 ↕	612 ?	643 z	632 z	588 ↑	628 z	656 ↑	635 ↓	649 z	653 z	639 z	624 z	622 ↓	630 z
29	599 ↕	440 ↓	403 ↕	465 ↕	517 ↓	485 z	597 ↕	660 ↑	641 z	653 z	643 z	643 z	645 z	651 z
30	622 ?	647 ↕	533 ↕	616 z	614 ?	576 ↓	548 ↑	593 ↕	628 z	668 ↓	649 z	641 z	639 z	645 z
Mean -	·076115	6030	6054	6260	6117	6192	6194	6465	6570	6563	6457	6463	6653	6727

October 1882. $\Phi = +62^\circ\,38'\,52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	620 z	633 ↓	487 ↑	660 ↕	679 z	664 z	637 ↕	626 z	643 z	643 z	635 z	630 z	632 z	633 z
2	620 ↓	637 ↑	[>1216]	476 ?	913 ↕	802 ↕	591 ↓	687 ↓	814 ↑	697 ↕	[<000]	658 ?	653 ↕	679 ?
3	708 ↓	662 z	647 ↓	607 z	660 ↓	672 ↓	674 ↑	622 ?	609 ↓	651 z	643 z	643 z	678 ↑	654 z
4	370 ↓	463 ↕	527 ↕	411 ?	569 z	674 ↕	574 ↕	597 ↓	440 z	546 ↕	487 ↑	697 ?	707 z	720 z
5	641 ↕	643 ↕	726 ↓	599 ?	610 z	672 ↕	612 ↑	553 ?	536 ?	637 ↕	582 ↕	523 ↕	569 ↕	693 ?
6	−021 ↑	463 ?	550 ↓	229 ↑	185 ↕	296 ↕	678 ↓	745 ↕	440 ↓	569 ↑	693 ↑	687 ?	705 ?	697 ↓
7	672 ?	674 z	662 z	662 z	658 ?	610 ↕	645 ↕	691 ?	653 ↑	687 ↑	654 ↓	666 ↓	668 z	685 z
8	681 ?	683 z	651 z	681 z	666 z	664 ↓	670 z	654 z	658 z	647 z	651 z	649 ↓	647 ↕	705 ↑
9	679 z	683 z	676 ?	641 ↕	660 ?	670 ?	574 ↕	624 z	641 z	653 z	653 ?	637 ↓	531 ↑	588 ↑
10	639 ↑	726 ↕	559 ↑	589 ↕	599 z	599 z	633 ↕	693 ↕	641 ↕	630 ↕	544 ?	662 ↕	569 ↓	670 z
11	569 ↕	670 z	396 ↕	654 ↓	576 z	616 ↓	639 ?	565 ↕	662 ↓	654 ↕	569 ↕	672 ↕	670 ↑	695 ↓
12	687 ↕	664 ↑	584 ↕	676 z	656 ↕	670 ↓	635 ?	662 ?	653 ?	681 ↕	656 ↑	660 ?	666 ↓	676 ?
13	618 ↕	707 ?	693 ?	678 z	679 z	635 ↑	589 ?	654 z	605 ↕	643 ?	647 z	645 z	656 z	668 z
14	676 ↓	628 ↑	580 ↕	519 ↑	607 ↕	643 ↕	580 ↕	616 ↕	612 ?	567 ?	565 z	660 ↕	679 ?	660 ↕
15	403 ↕	504 ↕	654 ↓	346 ↕	439 ↑	377 ↕	303 ↕	315 ↕	589 ↑	654 ↕	641 z	687 ↑	676 z	676 ↑
16	416 ↕	420 ↑	607 ↑	624 ↑	745 ?	708 ↕	687 ↓	643 ↕	620 ↕	616 ↕	599 ↓	668 ↕	741 ↕	767 ↕
17	411 ↕	433 ↕	718 ?	701 ?	666 ↕	633 ↓	681 ↕	689 ↕	696 ↓	685 ?	670 ?	683 ↕	651 ↕	676 ?
18	633 ↕	450 ↕	527 ↑	672 ↕	666 ?	666 ?	679 ↕	681 ?	662 ?	660 ?	653 ?	666 ?	668 ↑	662 z
19	658 ↕	674 ↕	679 ↑	658 z	630 ↓	609 ↑	643 ↓	654 ↑	628 ↓	653 z	641 z	649 z	647 z	654 z
20	681 z	683 z	681 z	662 z	672 ↑	666 z	658 z	660 ?	658 z	662 z	658 z	656 ?	674 ?	666 z
21	676 z	666 z	672 z	664 z	674 z	662 z	676 z	674 ?	670 z	668 ↓	660 ?	658 z	664 z	666 z
22	660 ↕	658 ↑	681 ?	487 ↑	662 ↓	616 ↑	601 ↓	660 ↓	442 ↑	601 ↕	607 ↓	609 ?	781 ↕	802 ↕
23	593 ↑	081 ↕	448 ↑	599 ?	563 ↕	603 z	678 ↓	654 ↕	679 ?	664 ?	653 ?	664 z	649 ↕	676 ↕
24	570 ↑	491 ↑	654 ?	641 ↕	641 ?	495 ↓	632 ↕	651 ?	630 ↕	660 z	687 ?	679 ?	674 ↕	679 ?
25	506 z	506 ↕	726 ↓	710 ?	461 ↕	614 ↑	637 ?	610 ↑	668 ↕	651 ↓	666 ↕	681 ↓	695 ↓	703 ↕
26	699 ↓	683 ↑	658 ↓	664 z	599 ?	616 z	601 ↑	624 ↕	628 ↕	645 ↕	687 ↓	672 ?	707 z	678 ↕
27	683 ↕	614 ↕	660 ↕	660 ↑	683 z	664 z	651 ↑	624 ↕	630 ↓	610 ↑	685 ↓	666 ↕	693 ↓	697 ↕
28	676 ↕	681 ?	693 ↓	660 ?	570 ↕	113 ↕	403 ↕	499 ↑	645 ↕	612 ↕	645 ↑	699 ↕	745 ↑	818 ↕
29	126 ↑	390 ↕	267 ↕	641 ↕	699 ↓	683	637 ↕	649 ?	691 ↑	605 ↕	660 ↓	679 ↕	724 ↑	753 ↕
30	565 ↓	337 z	605 ↕	589 ↕	595 ↑	628	548 ↕	666 ↕	676 ↕	647 ↕	658 ↕	681 z	681 z	695 ↓
31	588 ↕	390 ↕	588 ↕	656 z	624 ↑	678 ↑	678 z	681 z	683 ↕	670 ↕	662 ↓	668 z	687 ?	685 ↕
Mean -	·075711	5676	6085	6037	6228	6103	6169	6330	6291	6409	6370	6598	6705	6895

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Local Mean Time (Bifilar Magnetometer). *September* 1882.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
679 z	863 ↡	695 ↓	722 ?	722 z	741 ?	542 ↡	500 ↡	695 ?	728 z	664	883	412	471
683 z	701 z	743 z	707 z	716 ↓	685 z	695 ?	678 ?	582 ↓	654 ↟	634	743	411	332
732 ↓	757 ↑	695 ?	712 z	674 ?	697 ↑	738 ?	697 z	601 ↡	628 ↓	667	765	256	509
651 ↑	835 z	843 z	847 z	855 z	849 z	845 z	847 z	845 z	839 z	716	857	401	456
689 ↑	741 ?	697 ↑	635 ?	607 z	630 z	635 z	643 z	637 ↓	639 z	775	1103	531	572
624 z	658 z	679 z	653 z	710 ?	730 ?	740 ↡	649 ↡	593 ↡	469 ↟	624	743	469	274
620 ↓	616 ↓	660 ↓	693 ↑	716 ↓	258 ↟	635 ↓	645 ↑	635 z	607 ?	612	726	258	468
751 ↓	683 z	720 ↓	714 ↑	765 ↑	570 ↡	662 ?	465 ↟	149 ↟	457 ↡	618	771	149	622
738 ↓	685 z	670 z	699 z	732 ↓	630 ?	635 ↑	641 ↓	591 ↓	653 ↟	631	763	344	419
681 ?	691 ↑	708 z	689 z	670 z	674 ↑	670 ↡	525 ↑	622 ↟	388 ↡	628	708	386	322
626 z	662 ↓	683 ↑	658 z	656 z	651 z	656 ↡	656 z	658 ↓	656 z	628	697	326	371
674 z	658 ↑	689 z	651 ↑	681 ?	685 ↑	620 ↓	561 ↟	616 ↡	452 ↑	639	689	263	426
660 z	685 ↡	691 ↑	658 ?	651 z	649 z	656 z	660 z	656 z	660 z	647	691	595	096
691 ↓	637 z	653 z	662 ↑	685 ↓	666 z	689 z	679 ↓	668 z	666 z	646	693	588	105
697 z	660 z	662 z	674 z	679 ?	697 z	707 ↡	681 z	679 z	672 ↓	663	712	599	113
724 ↑	745 ↡	763 ↑	771 z	705 ↡	691 ↑	678 ↓	643 z	687 z	639 ↡	668	771	553	218
637 z	654 z	654 ↑	643 z	654 z	658 z	653 z	658 z	654 z	641 ?	653	714	463	251
639 z	645 z	670 z	674 z	660 ↑	662 ?	691 ↡	708 ?	697 ↓	689 z	649	708	538	170
649 z	639 ↡	656 ↡	660 z	668 z	672 z	662 z	687 z	670 z	668 z	615	687	333	354
660 z	668 z	687 z	736 ↑	672 ?	523 ↡	565 ↟	553 ?	521 ↑	693 ↡	648	740	459	281
724 ?	695 z	726 ↑	693 z	664 z	691 z	557 ?	609 ↓	647 ↑	551 ↟	618	728	278	450
635 z	716 ↑	724 ↓	662 z	672 z	620 ↡	589 z	110 ?	628 ↑	591 ↓	611	724	−013	737
703 z	678 z	678 ↑	668 z	685 ↑	691 z	722 ↓	701 z	653 ?	383 ↡	640	724	311	413
641 z	678 z	676 z	660 ?	654 z	666 z	681 z	664 z	662 ↑	618 ↡	638	681	506	175
668 z	653 ↓	662 z	662 z	674 z	668 z	679 z	693 z	674 z	589 ↡	610	693	386	307
645 z	658 z	662 z	660 z	666 z	679 z	679 z	670 z	649 z	637 ↓	633	683	506	177
6751	6908	6945	6870	6881	6551	6646	6239	6296	6103	·076457	·08103	·06987	·01116

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. *October* 1882.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
641 z	651 z	654 z	656 z	691 z	695 z	683 z	614 ↓	565 ↓	495 z	632	695	444	251
691 ↡	736 ?	824 ↡	743 ?	678 ↡	561 ?	178 ↡	683 ↓	687 ↓	685 ?	667	883	−141	*
651 ↓	736 ↡	658 ↓	695 ↓	693 ?	712 ↡	645 ↓	582 ↑	610 z	470 ↡	649	749	470	279
689 ?	664 z	653 ?	672 z	679 z	681 ?	674 ↓	607 z	433 ↓	355 ?	578	724	342	382
730 ↑	734 ↡	808 ?	767 ↡	500 ↓	298 ↡	−004 ↡	491 ↡	632 ?	−143 z	558	808	−143	951
710 ↓	·695 z	703 ↑	678 z	676 z	676 z	674 z	679 z	685 z	678 z	573	759	−136	895
666 ↓	703 ↑	676 ↑	668 z	674 ?	691 z	679 z	678 ↑	679 ↓	683 z	670	705	609	96
712 ↓	740 ?	679 ↑	685 ↑	693 ↓	695 z	687 ↓	693 ↑	691 z	683 z	677	743	637	106
779 ?	771 ↡	738 ?	761 ↓	714 z	722 z	712 ↡	683 z	593 ↡	472 ↡	660	779	390	389
712 ↓	685 ?	724 ↡	732 ↟	685 ?	662 ↓	703 ↓	379 ↟	679 z	693 ↓	642	755	337	418
722 z	672 ↟	703 ↟	747 ↟	722 ↟	712 ↟	641 ?	605 ↟	714 ↟	681 z	646	777	396	381
685 ↑	670 ↓	664 ↓	689 z	683 ↑	708 ?	656 ?	679 ↓	668 ?	388 ↡	654	722	385	337
666 z	670 z	674 ?	678 z	681 z	687 ↡	689 ↡	697 ↑	685 z	678 ↓	663	710	589	121
716 ↡	716 ↑	767 ↓	718 ↡	612 ↑	714 ↓	651 z	677 ↡	303 ↡	185 ↟	610	767	185	582
666 ↑	679 z	695 ?	743 ↟	707 ↓	699 z	699 z	710 ↑	660 ↓	534 ↟	585	753	303	450
771 ↑	932 ↟	794 ↟	804 ↡	761 ↡	782 ↡	622 ↑	329 ↟	651 ?	569 ↑	661	946	260	686
740 ↡	726 ↑	720 ↑	716 ↓	747 ?	699 ?	689 z	699 z	614 ↡	521 ↓	660	747	411	336
693 ↡	674 ?	678 ?	691 z	685 z	689 z	689 z	701 ↑	701 ?	678 ?	659	706	429	277
656 z	672 z	670 z	678 ?	678 ↓	678 z	685 ↡	685 ↑	685 z	683 z	660	689	605	84
670 z	670 z	676 z	674 z	674 z	676 z	678 z	681 z	679 z	681 z	670	683	656	27
670 ↑	681 z	685 z	699 ↑	701 ?	701 ?	705 z	569 ↓	500 ↡	633 ↑	662	705	478	227
784 ↓	660 ↑	781 ↑	863 ?	747 ?	635 z	645 z	553 ↡	472 ↓	540 ?	647	865	435	430
676 ↑	685 z	672 z	670 z	689 ↑	676 ↓	553 z	023 ↟	679 ↡	540 ↓	586	693	−006	699
689 ↡	699 ↓	701 ↟	676 z	699 ↑	730 ↡	658 ↡	192 ↡	281 ↡	610 ↡	613	743	32	711
716 ↓	703 ↓	679 z	741 ↓	705 ↓	743 ↡	610 ↡	612 ?	265 ↟	710 z	638	745	158	587
714 ↑	703 ?	699 ↓	722 z	722 z	685 ↑	708 ↓	603 ?	482 ↓	529 ↑	655	722	444	278
691 ↡	790 ↡	767 ↑	724 ↑	726 ↓	679 ↡	270 ↟	351 ↑	548 ↡	624 ↑	641	796	270	526
701 ↑	759 ↓	683 ↑	769 ↓	708 ↓	699 ↡	455 ↡	674 ?	572 ↑	610 ↡	628	828	92	736
738 ↓	747 ↡	741 ↑	730 ↟	693 ?	703 ?	693 ↓	578 ↟	712 ↡	647 ↡	632	769	−020	789
681 ↑	670 ↑	691 ↑	695 ↡	703 ↡	703 z	701 z	707 ↑	685 ↑	683 ↑	645	707	292	415
681 ?	679 z	695 ↑	718 z	716 ↑	732 ↓	703 ↓	703 ↡	708 ↓	670 ↡	664	734	385	349
7003	7087	7081	7162	6917	6814	6139	5844	5974	5634	·076386	·07946	·06857	·01089

* Off scale at 3 a.m. and 11 a.m.

November 1882. 0·07000+ (C. G. S. Units). $\Phi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	639	689	578	633	645	584	337	484	633	678	658	651	683	676
2	708	676	685	514	718	712	681	703	683 ?	676	662	679	683	653
3	685	687	705	697 ?	624	561	557 ?	699	674 ?	664 ?	660	662	677	681
4	681	691 ?	668	662	653 ?	668	654	653	662	662 ?	656 ?	658 ?	670	672 ?
5	703	710	685	677	693	677	676	668	683	679	672	658	769	641 ?
6	699	677	666	691	668	681 ?	679	693	672	656	708	681	674	666
7	632	588	649 ?	626 ?	691	557	546	278	390	589	705	679	710	728
8	603	597	484	586	584	487	597	664	670	666	666	668	699	706
9	677	624	570	516	287	370	429	516 ?	482	455	412	599 ?	645	687
10	681	681	672	666	666	647 ?	618	654	660	666 ?	664 ?	666 ?	681 ?	683
11	679	679	679	676	656	660	656	664	643	645	649	651	647	647
12	538 ?	676	440	649	245	−002	495	697	260	734	794	693 ?	757	800
13	014	236	212	504	019	388	658	474	388	333	693 ?	609	769	749
14	461	656	521	534	603	553	−351	119	298	296	467	643	668	586
15	405	647	489	601	681	523	538	589	570	559	647	662	678	691
16	508	601	599	853	714	687	703	679	689 ?	664	672	643	649	632
17	630	457	[>1080]	429 ?	337	457	570	728	1053	079	−108	439	169	681
18	331	589	−129	635	720	732	512	710	605	647	510	628	736	570
19	403	572	437 ?	180	269	[>1080]	−293	−051	597	622	674	695	710	578
20	[>1080]	−246	207	−102	196	855	716	855	966	903	603	720	628	804
21	685	674 ?	666	618	550	327	679	375	370	582	687	664	643	603
22	607	605	580 ?	630	641	649	645 ?	45	624	637	647	645	649 ?	662
23	599	614	340	616	459	353	316	469	570	601	639	643	653	677
24	500	407	551	677	626 ?	601	641	582 ?	630	653	683 ?	687 ?	668	676
25	664	533	626	586	305	364	392	322	351	954	440	588	622	651
26	624	658	639	639	548	499	440	467	603 ?	626	649	666	656	759 ?
27	653	618	478	540	651	628 ?	599	580	668	626	628	639 ?	654	712
28	416	516	591	620	605	538	681	697	645	662	651	681	656	662
29	676	653	662	666	651	664	662	676 ?	679	676	670 ?	656 ?	653	660
30	555	664	767	689	649	607	607	643	703	691	670	679	664	672
Mean -	·075743	5810	5420	5836	5451	5527	5213	5644	6040	6160	6142	6511	6607	6755

December 1882. $\Phi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	649	632	645	647	559	533	595	633	647	664	660	649	651	645
2	654 ?	664	653	649	641	637	628 ?	647	639	647	653	649	658	672
3	685	668 ?	633	649 ?	643	639	643	653	658	656 ?	701 ?	672	647	662
4	548	593	697	578	544	557	612	480	247	429	676	677	647	724
5	662 ?	676	643 ?	605	635	630	643	658	662	658	656	656	654	677
6	576	580 ?	656	658 ?	662 ?	660	651	679	651	685	653	670	677	677
7	672	678	656	660	670	662	612	635	633	614	620	687 ?	656	689
8	676	666	658	662	610	656	666	672	670	666	662	656	656	658
9	666	697	656	656	651	656 ?	620	591	459	516	510	689	718	687
10	691	685	668	637	620 ?	670	666	666	670 ?	668	658 ?	656	656	664
11	429	335	626	542	586	660	620	658	542	689	714	618 ?	612	734
12	666 ?	626	401 ?	383	687	677 ?	628	578	593	572	654	683	676	654 ?
13	658	689	666	637	593 ?	654	666	672	679 ?	656	668	651	664	670 ?
14	653	654	672	668	626	631	668	685	677	677	656	664 ?	662	666 ?
15	668	668	685	662	681	658	685	672	630	668	662	664 ?	649	591
16	315	240	525	605	626	664 ?	666	630	574	504	609 ?	695	714	683 ?
17	654 ?	647	633	639	628	609	677	660	662	658	653	656	656	660 ?
18	676	676	662	664	664	662	662	668	668 ?	670	660	654	654	656
19	455	478	645	633	689 ?	670	651	664 ?	666	674 ?	662	664	641	662
20	565	531 ?	565	570	497	424	099	121	544	788	741	607	714	716
21	126	296	542	637 ?	612	394	467	589	674	588	670	703	610	726
22	422	589	313	533	540	407	597	658	626	668	666	660 ?	647	633
23	597	610	672	440	630	622	470	574	591	666	626	695	660	637
24	489	184	463	605	633	469	318 ?	368	478	635	645	718	631 ?	651
25	480	637	593	531	351	588 ?	658 ?	643	654	662 ?	645 ?	662	654	674
26	666 ?	521	639 ?	591	631	635	614	635	666	668	656	685	649 ?	653
27	674	664	668	683	695	679	679	672	679	674	676	672	726 ?	664 ?
28	691	651	635	370	435	544 ?	706	695	672	674	654	666	662	687
29	418	597	645	326	433	444	495	591	582	595	666	775	732	660
30	672	658	649 ?	580	521	603	572	674	612 ?	521	578	593	677	677
31	647	679	654	569	381	474	570	620	647 ?	641	633	689 ?	628 ?	699
Mean -	·075839	5861	6166	5893	5927	5957	5969	6142	6146	6371	6530	6687	6625	6712

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Local Mean Time (Bifilar Magnetometer). *November* 1882.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
660 ↑	710 ↑	705 ↓	691 z	701 ↓	703 ↓	697 ↓	703 z	660 ↓	668 ?	644	714	537	377
670 ↓	697 ↓	755 ↑	736 ?	761 ↓	763 z	697 z	780 ↓	706 ↓	668 ?	694	891	504	387
685 ↓	683 ↑	685 z	716 ↓	705 ↓	693 ?	691 ?	685 ↑	699 ↑	697 ?	673	734	538	196
685 z	685 z	699 ↑	699 ↓	693 z	695 ↑	712 z	716 z	741 ?	763 ↓	683	775	653	122
679 ↑	649 ↓	790 ↓	784 ?	755 ↓	845 ↓	773 ↑	741 ↑	732 ↑	720 z	710	845	635	210
664 ↓	689 ↑	732 ?	738 ?	691 ↓	687 ?	712 ↓	635 z	724 ?	761 ?	688	761	635	126
747 ↓	706 z	728 ↓	689 ?	697 z	689 ?	706 z	612 ↓	491 ↑	405 ↓	618	747	276	471
710 ?	720 ↓	708 ↓	720 z	730 z	782 ?	751 ↓	755 ↑	641 ?	561 ↑	656	782	461	321
755 ↓	716 ↓	672 ↓	677 ↓	685 ↓	670 ↑	714 z	693 z	681 z	676 z	592	761	232	529
672 ↑	672 z	699 ↑	708 ↑	670 z	679 z	674 z	674 z	670 z	677 z	670	712	616	96
674 ↓	670 ?	757 ↓	806 ↓	751 ?	687 ↑	714 ?	681 ↓	−332 ↓	403 ↓	626	806	−332	1138
635 ↓	593 ?	557 ?	536 ↑	605 ↑	679 ↓	392 ↓	470 ↑	398 ↑	563 ↑	550	802	−049	851
555 ↑	697 ↑	705 ?	790 ↑	755 ?	603 ↓	557 ↓	664 z	493 ↓	243 ↓	504	820	−035	855
712 ↑	1047 ↓	934 ↓	1091 ↑	736 ↓	928 ↓	806 ↑	643 ↓	712 ↓	628 ↑	595	1091	−351	1442
678 ↓	703 ↑	763 ↑	740 ↓	724 ↑	741 ↑	736 ↑	736 ↓	691 ↓	616 ↓	642	778	405	373
693 ↓	810 ↓	782 ↑	792 ↑	745 ↑	658 ↑	730 ↑	685 ↓	597 ↓	668 ↓	685	950	457	493
538 ↓	450 ↑	216 ↑	144 ↑	173 ↓	194 ↓	322 ↑	474 ↓	487 ↓	424 ↑	406	1107	−974*	2081
521 ↑	455 ↑	749 ↓	724 ↑	519 ↑	425 ↑	546 ↑	618 ↑	557 ↓	576 ↓	561	824	−129	953
649 ↑	641 ↑	588 ↓	283 ↓	137 ↑	258 ↑	189 ↑	−002 ↑	101 ↑	351 ↑	373	761	−667*	1428
681 ↓	741 ↓	755 ↓	743 ↑	589 ↓	565 ↑	677 ↑	508 ↓	561 ↓	607 ↓	588	1039	−834*	1873
705 ↓	666 ↓	561 ↑	653 ↓	685 ↑	649 ?	668 z	580 z	409 ↓	516 ↑	592	706	263	443
681 ↓	649 ↓	674 ↑	683 ↑	664 ?	689 ↓	614 ↑	574 ↑	570 ↑	614 ↓	636	726	570	156
656 z	676 ?	693 z	676 ?	677 ?	681 ↑	593 ?	368 ↓	626 ↓	469 ↑	569	693	252	441
670 ↓	812 ↓	796 ?	824 ↓	726 ↓	732 ↓	649 ↓	591 ↑	699 ↓	653 ↑	655	832	359	473
786 ↓	610 ↓	865 ↑	837 ↓	741 ↑	654 ↑	651 ↑	689 ↓	351 ↑	695 ↓	594	1035	258	777
732 ?	738 ?	670 ↑	683 ↑	710 z	609 ↓	734 ↓	693 ↓	664 ↓	394 ↓	629	767	254	513
693 ?	693 ?	662 ↑	707 ↓	699 ?	703 ↑	707 ?	685 ?	591 ↑	578 ↓	641	716	459	257
668 z	664 ↑	679 ↑	705 ↓	691 z	732 ↑	763 z	745 ?	743 ↑	693 z	654	765	373	392
668 ?	672 z	683 z	676 z	679 z	689 ?	699 z	687 ↓	582 ↑	512 ↓	660	699	370	329
691 ↑	740 z	703 ↓	691 ↓	703 z	676 ↓	654 z	656 ↑	647 ↑	666 ↑	670	781	508	273
6738	6885	6985	6991	6599	6586	6509	6247	5631	5822	.076159	.08107	.06026	.02081

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. *December* 1882.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
697 ↓	664 z	740 ↑	745 ↑	759 ↓	691 ↑	707 ↑	697 ↑	681 z	674 ↑	661	761	533	228
681 ↑	685 ?	685 ↑	693 ↑	695 ↑	718 ↑	740 ↓	701 ↑	779 ↑	697 ↓	673	782	626	156
718 ↓	681 ?	689 ↓	703 ↑	730 ↑	745 ↓	749 ↑	738 ↓	681 ?	536 ↓	674	782	407	375
757 ↓	712 z	689 ↓	683 ↑	697 ↑	677 ↑	681 ↑	679 z	569 ↑	637 ↓	616	757	241	516
666 ↓	703 ↓	681 ?	670 z	685 ↑	676 z	676 ↓	677 z	591 ↑	548 ↑	653	708	548	160
699 ?	687 z	687 z	687 ↓	716 z	710 ↓	705 ↑	676 z	676 z	670 z	668	716	548	168
679 ↑	677 ?	681 ?	681 ↓	676 ↑	676 z	674 ↓	676 ↓	676 z	674 ↑	662	689	610	79
664 ↑	662 ?	666 z	668 z	674 z	685 ?	714 ?	649 ↓	469 ↑	718 ↑	658	718	437	281
761 ↑	691 z	691 ↑	769 ↑	718 ↓	689 ↑	714 ↑	716 z	712 ↑	695 ↓	663	769	459	310
668 z	678 z	674 ↓	681 z	685 ↑	708 z	708 ↓	681 ↓	538 ↑	637 ↑	663	714	538	176
706 ↑	804 ↑	753 ↑	738 ↓	734 ?	703 ?	685 ↓	632 ↓	540 ?	645 ↓	637	853	335	518
677 ↓	693 ↓	693 ↑	724 ↓	710 ↓	695 z	703 ↑	679 ↓	672 ↓	595 ↑	638	726	307	419
677 ↓	691 z	695 ↓	681 z	689 ↑	683 ↑	683 ↑	685 z	677 ↓	676 ↓	669	699	593	106
679 ↓	683 ↑	687 z	695 z	697 ↓	699 z	683 z	679 z	679 z	687 ↑	672	699	624	75
670 ↓	1012 ↑	950 ↓	710 ↑	679 ↑	903 ↑	958 ↓	826 ?	701 ↓	570 ↑	717	1091	500	591
695 ↑	677 ↓	708 ↑	670 ↓	703 ↓	738 ↑	691 ↑	693 ↑	718 ↓	676 ↓	625	743	182	561
654 z	674 z	691 ?	689 z	726 ?	779 ↑	788 ↓	706 z	685 z	679 z	673	792	601	191
679 ↑	728 ↓	724 ↓	720 ?	656 ↓	570 ↓	570 ↑	258 ↓	628 ↑	542 ↓	640	743	207	536
658 ↓	660 z	668 z	666 z	676 z	716 z	712 ↓	728 ↓	668 ↓	506 ↓	646	736	260	476
712 ↓	553 ↑	550 ↑	601 ↓	388 ↑	548 ↓	467 ↓	595 ↓	−060 ↑	−131 ↓	487	788	−212	1000
683 ?	681 ↓	728 ↓	689 z	691 z	681 ↓	628 ↓	800 ↓	630 ↓	510 ↓	598	800	122	678
708 ↑	701 ?	718 ↓	720 ↑	693 ↑	664 z	705 ↑	714 ↑	649 ↑	591 ↓	617	728	313	415
654 ↓	677 z	730 ↑	679 ?	681 z	670 ?	685 ↓	666 ↓	544 ↑	504 ↑	624	743	433	310
666 ↑	670 z	670 ↓	674 z	708 ↓	701 ↑	683 ↑	685 ↓	664 ↓	437 ↑	576	728	184	544
679 z	672 z	674 ↓	666 ↑	679 z	674 z	674 z	679 ↓	677 ?	656 ↓	631	685	344	341
664 ↓	705 ↓	687 ↑	716 ↑	718 ?	745 ↓	710 ?	763 ↑	790 ↓	689 ↑	670	794	506	288
681 ↓	703 ↓	734 ↑	755 ↑	703 ↑	685 ↓	677 ↑	685 ↓	637 ?	679 ↓	685	769	637	132
687 ↑	697 ?	701 ↑	734 ↓	771 z	769 ↓	895 ↓	773 ?	706 ?	489 ↓	665	895	302	593
693 ↑	767 ↓	730 ↓	718 ↓	691 ↑	749 ?	718 ↓	714 ?	726 ↓	695 ↑	631	780	326	454
798 ?	724 ↑	730 ↑	708 ↑	677 ?	720 ↑	701 z	703 ↑	649 ↑	705 ?	654	798	448	350
726 ↓	738 ↑	721 ↓	716 ↑	695 ↓	732 ↑	738 ↓	687 z	714 z	701 z	654	757	381	376
6915	7016	7041	6984	6903	7038	7039	6852	6334	5996	.076456	.08091	.06788	.01303

* November 17. Off Scale at 3 a.m.
„ 19. „ 6 a.m.
„ 20. „ 1 a.m.

January 1883. 0·07000+ (C. G. S. Units). $\varphi = +62^\circ\ 38'\ 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	603	649	559	567	653	135	601	670	660	681	645	649	660	683
2	683	674	658	651	559	508	582	693	660	607	626	639	635	676
3	653	519	656	670	624	531	599	660	656	660	656	653	662	658
4	660	649	616	588	555	662	689	681	672	668	664	664	658	662
5	678	674	678	693	679	678	679	672	666	666	662	666	633	674
6	660	643	630	546	489	525	274	563	500	714	703	656	683	681
7	676	679	230	375	531	670	574	452	335	373	383	533	620	749
8	664	651	241	493	647	569	457	681	664	654	676	691	670	649
9	531	609	605	649	559	603	612	603	653	649	589	651	683	685
10	670	685	662	656	670	666	662	666	658	651	658	664	666	654
11	672	668	670	666	662	660	662	666	656	658	651	654	662	658
12	710	697	664	637	630	678	672	658	647	630	635	643	653	647
13	676	676	668	666	668	647	533	534	603	643	668	670	662	662
14	656	681	681	658	681	654	641	641	658	654	635	612	670	647
15	677	674	654	489	442	557	651	653	578	576	676	668	637	639
16	603	645	664	637	601	525	593	631	654	668	656	651	654	656
17	418	442	368	588	557	572	517	396	512	710	693	658	641	656
18	252	574	593	570	620	647	651	670	658	586	639	695	693	645
19	546	662	645	616	416	589	628	658	624	649	653	660	651	653
20	593	601	534	385	433	437	525	411	405	536	645	679	660	660
21	588	565	570	512	565	484	502	544	610	651	610	687	668	660
22	666	645	632	424	353	609	681	691	685	656	658	654	633	674
23	504	500	553	601	597	563	630	681	630	666	662	664	649	666
24	666	658	662	656	664	664	654	643	620	610	614	603	703	628
25	639	674	607	346	394	616	569	589	527	523	461	442	738	730
26	593	620	403	565	588	270	280	708	593	603	567	707	633	810
27	476	482	612	658	691	635	517	431	551	666	630	708	672	664
28	672	668	635	626	637	658	643	668	654	653	643	662	728	666
29	565	639	676	649	626	565	555	651	633	649	645	635	630	654
30	674	569	605	603	681	672	664	647	645	666	658	656	662	678
31	651	597	658	469	658	593	597	666	651	654	670	647	649	664
Mean -	·076121	6248	5900	5774	5848	5755	5838	6186	6103	6332	6333	6491	6619	6706

February 1883. $\Phi = +62^\circ\ 38'\ 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	664	658	645	616	649	738	666	668	609	412	067	649	630	385
2	651	035	298	533	603	407	283	637	431	346	499	666	649	738
3	527	632	699	740	630	327	612	491	546	510	666	734	622	718
4	563	499	633	649	448	465	536	525	639	531	489	603	759	681
5	626	656	305	572	716	626	674	658	493	565	668	685	672	685
6	697	670	635	645	499	626	660	553	270	171	499	658	605	681
7	678	631	658	653	662	676	678	676	653	662	654	651	660	685
8	651	616	605	653	658	626	588	639	651	645	647	660	662	674
9	668	683	662	637	670	670	676	676	668	658	651	637	645	672
10	687	580	664	660	654	603	662	670	670	681	668	672	678	664
11	610	622	630	681	685	678	658	588	649	645	664	662	668	666
12	678	670	666	610	614	656	641	622	653	649	666	660	660	672
13	681	678	676	672	676	643	662	647	666	668	660	662	668	691
14	508	656	703	662	670	591	357	459	584	555	654	645	679	706
15	666	656	658	612	664	666	678	676	674	672	664	666	658	662
16	614	626	649	643	595	645	567	584	676	679	653	654	664	662
17	586	645	645	658	607	508	656	622	250	538	647	664	674	689
18	674	677	679	687	672	676	654	651	689	693	681	679	668	649
19	662	668	666	670	664	668	668	664	668	674	670	662	666	660
20	−193	519	654	654	390	416	424	605	679	708	701	687	677	683
21	510	685	641	641	683	637	641	609	666	668	668	664	677	674
22	635	440	399	517	553	383	302	198	519	533	603	624	722	745
23	420	610	656	716	651	618	399	388	396	672	681	674	662	706
24	677	616	401	647	668	747	469	−174	017	442	599	565	508	697
25	461	232	478	668	398	651	693	656	701	691	689	656	683	679
26	705	670	683	647	551	429	668	674	606	508	605	643	624	635
27	294	614	653	597	605	637	429	497	399	294	104	649	601	790
28	506	435	620	656	276	261	553	318	000	444	647	701	757	722
Mean -	·075752	5850	6058	6427	6004	5812	5740	5528	5401	5687	5987	6583	6606	6775

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Local Mean Time (Bifilar Magnetometer). *January* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
668 ?	660 z	666 ↕	687 ↓	716 z	710 ?	705 z	708 ↓	705 ↓	689 ?	638	716	135	581
654 ↑	660 ↓	676 ↓	676 ↑	679 ↕	672 z	705 z	670 ↑	672 z	664 z	649	695	508	187
654 z	674 ↓	668 ↕	662 ↕	662 ↓	674 z	674 z	674 ↓	670 z	670 ↓	648	674	470	204
653 z	664 z	670 ↓	693 z	705 ↑	775 ↓	724 ↓	687 ↓	685 ↕	559 ↑	662	782	544	238
691 ↑	714 ↓	753 ?	747 ↓	794 ↕	697 z	740 ↕	726 ?	681 ↓	639 ↕	690	794	612	182
699 ?	701 ?	699 ↓	681 ↕	687 ?	708 z	712 z	762 ↕	759 ↕	689 ↕	640	780	97	683
707 ↕	714 ?	695 ↕	753 ↕	714 ?	743 ↓	683 ?	538 ↓	399 ↓	645 ↑	573	828	191	637
664 ↑	714 ↕	685 z	693 z	707 ?	726 z	722 ↑	757 ↑	697 ?	695 z	644	759	191	568
749 ↓	679 ↑	734 ↓	674 ↓	676 ?	691 ↕	697 ?	708 ↓	695 ↓	714 ?	654	749	420	329
718 ?	736 ↕	705 ↕	708 z	788 ↓	771 ↓	732 ?	672 ↓	664 z	668 z	685	788	624	164
662 z	668 z	666 z	668 z	668 z	670 ↑	681 z	689 ↓	693 ↑	701 ↕	668	718	651	67
668 z	672 z	670 z	670 z	674 ↑	678 z	676 z	674 z	674 z	676 z	663	710	609	101
660 ?	685 ↑	662 ↑	672 ↑	670 ↑	664 z	645 z	660 z	672 z	664 ↓	651	693	463	230
670 z	670 ?	681 z	676 z	672 z	689 z	681 z	679 ↓	668 z	672 z	663	689	610	79
654 ↓	668 ?	678 ↕	695 ?	701 ↓	687 z	670 z	662 z	639 ↓	551 ↓	632	701	442	259
666 ↑	678 ↕	672 z	703 ↑	674 ↑	691 ↑	703 ↓	624 ↓	457 ↕	502 ↕	633	706	444	262
687 ↓	689 ↑	672 ↓	687 z	683 ↓	687 ↑	672 ↓	582 ↑	632 ↕	647 ↓	598	726	267	459
765 ↑	681 ?	679 ↕	699 ?	689 z	672 z	674 ↓	668 ↓	666 ↓	622 ↕	637	775	171	604
658 z	678 z	670 z	681 z	679 ↓	672 ↓	656 ↓	662 z	656 ↓	695 ?	639	695	403	292
676 ↓	681 z	705 z	695 z	716 ↑	747 ↕	670 ↕	738 ↑	701 ↑	753 ↓	607	775	377	398
689 ↑	672 ?	676 ?	689 ↑	681 ↓	676 ↑	674 ↓	683 z	678 z	656 z	624	699	315	384
674 ↑	653 z	679 ↓	679 ?	666 ↑	672 z	664 z	679 z	681 ↑	670 z	640	697	335	362
651 z	679 ?	670 ↕	670 z	664 ↓	678 ↓	674 ↕	676 z	681 z	681 z	637	685	411	274
612 ?	757 ↕	718 ↕	771 z	732 ?	693 ?	699 ?	689 ↓	678 z	647 ↑	668	773	599	174
681 ↑	678 ↓	674 ↓	724 ↕	734 ?	710 ↕	529 ↓	601 ?	712 ↓	605 z	604	782	327	455
724 ?	708 ↓	703 ↑	710 ↑	732 ?	796 ↓	761 ↕	722 ↓	691 ↓	685 ↓	632	841	7	834
697 ↓	718 ?	736 ↓	769 ?	820 ↓	796 ↕	827 ?	786 ↓	790 ↑	720 z	668	913	368	545
666 ?	726 ?	708 z	685 z	765 ↓	786 ↓	691 ?	664 z	664 z	616 ?	674	808	616	192
679 ?	674 ↓	656 ↓	678 ?	679 ?	701 z	689 ↓	687 z	674 z	683 ↑	648	705	463	242
656 ↕	693 ↑	689 ?	722 z	654 z	714 ↑	738 ↕	697 z	658 z	586 ↑	662	745	359	386
662 ↕	724 ?	724 z	712 z	687 ↑	666 ↑	718 ↓	683 ↓	678 z	664 ↕	655	724	446	278
6779	6893	6884	6980	7022	7068	6931	6809	6664	6557	·076453	·07913	·07007	·00906

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. *February* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
724 ↑	808 ↕	738 ↕	740 ?	540 ↕	820 ↕	741 ↕	670 z	649 ↑	523 ↓	625	824	67	757
703 ↕	806 ↕	855 ↕	736 ↕	693 ↕	708 ↕	703 ↕	653 z	037 ↓	087 ↕	531	877	−352	1229
741 ?	730 ↓	697 ↕	683 ?	720 ↓	616 ↓	775 ↕	769 z	674 ?	169 ↕	626	777	88	689
678 ↕	697 ↕	755 ↓	718 ↕	759 ↑	753 ↑	730 ?	612 ↕	724 ↓	699 ↕	631	765	381	384
703 ?	712 ↑	718 ↑	705 ?	710 ↓	747 ↕	734 ↕	790 ↕	714 ?	637 ?	657	800	302	498
660 ↕	679 ↑	666 ↕	685 ↕	697 z	678 ↓	712 ↓	732 ?	747 z	676 ↓	616	747	171	576
664 ↓	678 ↑	683 z	678 z	685 ?	689 z	681 z	695 z	716 z	693 z	672	716	605	111
678 z	681 ↑	685 z	697 z	691 ↓	691 z	691 z	695 z	674 ↑	601 ?	656	697	586	111
664 z	685 z	736 ↑	743 ↑	747 z	818 ↓	751 ↓	755 ↓	740 ↑	714 ↕	692	820	637	183
668 z	670 z	672 z	674 ↓	674 z	678 z	679 z	683 z	674 z	630 ?	663	697	576	121
670 z	670 z	674 z	670 z	676 z	678 z	678 z	685 z	676 z	691 ↓	661	691	584	107
681 ↓	678 z	678 z	676 z	678 z	678 z	678 z	676 z	678 z	678 z	662	683	610	73
674 ↓	672 z	672 z	676 z	689 z	683 z	695 ↓	699 z	701 z	609 ↕	671	703	595	108
664 ↕	681 ↑	708 z	716 ↕	734 ↓	689 z	687 ?	670 z	676 ?	654 ↑	637	734	315	419
695 ↓	691 ↓	751 ↑	706 ↕	747 ↓	632 ↑	726 ?	697 ↓	633 ↕	612 ↕	673	763	605	158
662 z	660 z	666 z	666 z	672 z	666 z	677 ↓	683 z	647 z	335 ↓	635	683	318	365
712 ↕	771 ↓	753 ↓	689 ↕	681 ?	654 ↕	677 z	681 z	681 z	674 z	640	775	250	525
668 ↕	676 z	660 ?	681 ?	703 ↕	693 ↓	506 ↕	741 ↑	697 z	653 ?	671	753	500	253
658 ?	683 z	676 ↓	676 ↑	685 ?	683 z	681 ↕	691 ↓	685 ?	683 z	672	703	651	52
664 z	672 ↑	681 z	670 z	672 z	672 z	679 z	681 ↓	683 z	605 z	595	716	−226	942
743 ↑	710 ?	728 ↑	806 ↑	736 ↕	784 ↑	605 ↕	751 ↕	728 ↓	647 ?	679	806	457	349
740 ↓	808 ↓	641 ↓	595 ?	796 ?	769 ?	794 ?	745 ?	463 ↑	153 ↑	569	812	−470	1282
718 ↕	736 ↑	701 ↑	738 ↕	699 ↑	755 ?	718 ↑	668 ↕	607 ↓	732 ?	638	755	189	566
712 ?	833 ↓	804 ↕	578 ↕	026 ↕	506 ↓	582 ↕	362 ↑	591 ↓	580 ↕	518	881	−275	1156
689 ↕	689 ↕	693 ↓	705 ?	724 ↑	674 ↕	741 ↓	478 ↓	626 ↓	230 ↕	607	759	128	631
718 ↕	693 ?	745 ↑	738 ↑	759 ?	763 ?	743 z	718 ↑	693 z	576 ↕	658	763	392	371
830 ↕	871 ↕	948 ↕	895 ↓	830 ↕	765 ↕	633 ↓	626 ↕	178 ↕	708 ↓	602	948	23	925
716 ↑	714 ?	726 ↓	732 ↑	804 ↕	820 ↓	666 ↕	502 ↕	493 ↕	614 ↕	570	820	−016	836
6963	. 7165	7182	7026	6867	7058	6915	6717	6245	5665	·076334	·07948	·06530	·01418

March 1883. 0·07000+ (C. G. S. Units). Φ = + 62° 38′ 52″

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	427 ↑	457 ↑	603 ↓	472 ↓	164 ↑	392 ↑	570 ↓	327 ↓	485 ↑	565 ?	504 ↓	643 ↓	630 ↓	695 ↓
2	439 ↓	551 ↓	637 ↓	534 ↓	561 ↑	261 ↓	344 ↓	359 ↑	340 ↑	551 ↑	635 ↓	620 ↑	712 ↓	720 ↑
3	633 ↓	491 ↓	641 z	656 ↑	651 ↑	612 ↑	500 ↓	504 ↓	527 ↑	609 ↑	637 ↓	687 ↓	681 ↑	726 ↓
4	672 ↑	514 ↑	651 ?	654 z	618 ↓	608 ↓	614 ?	626 z	658 ↓	658 ?	649 ↑	666 ↓	683 ↓	708 ↓
5	672 ↑	674 ↓	633 ↑	470 ?	525 ?	630 ?	639 ↑	622 ↑	693 ↓	679 ↓	679 ↓	691 z	687 ↓	676 ↓
6	683 ↓	632 ↑	647 ↓	609 ↓	589 z	618 ↓	633 ↓	773 ↓	677 ↓	668 z	676 ↑	662 ↓	656 ↑	726 ↑
7	651 ↑	407 ↓	533 ↑	666 ↓	620 ↑	580 ↑	618 ?	624 ↓	641 ↓	538 ?	609 ↑	685 ↑	676 ?	683 ↓
8	679 ↓	514 ?	595 ↓	679 ?	485 ↓	654 ↓	392 ?	403 ?	643 z	676 z	660 ↑	660 z	753 ↓	826 ?
9	677 z	674 z	660 ?	357 ↑	660 ↑	718 ↓	679 ?	656 ↓	576 ↓	521 ↑	589 ↑	618 ?	672 z	677 ↓
10	572 ↑	553 ↓	626 ?	637 ↓	612 ↓	610 ?	550 ↓	601 z	614 z	647 z	653 ↓	660 ↑	699 z	705 ↓
11	662 ↓	658 ↓	536 ↑	635 ↓	563 z	527 z	609 ?	630 ↑	643 z	674 z	670 ↓	662 z	674 z	666 z
12	649 ↓	677 z	681 z	693 z	687 z	674 z	574 ↓	578 ↓	676 ↓	699 ?	689 ?	664 ↓	689 ↓	699 ?
13	551 ↓	658 ?	467 ↑	542 ↑	710 ?	379 ↑	668 ↓	706 ↑	656 ↑	676 ↑	679 z	666 ↓	670 z	668 ?
14	504 ↓	622 ↑	672 z	385 ↓	316 ↑	517 ?	609 ↓	695 z	624 ?	660 ↓	662 ↓	685 ?	685 ↑	689 ↓
15	666 ↓	662 ↓	651 ↑	647 ↑	658 ↑	687 ↓	685 z	681 z	681 z	679 z	676 z	660 z	654 z	664 z
16	705 z	672 z	679 z	677 ↑	670 ?	664 ↓	654 ?	637 ↑	599 ?	637 ↓	658 ↓	658 ?	668 ↑	687 ↑
17	672 ↑	555 ↑	641 ↑	641 ↑	645 z	662 ↑	670 z	687 z	664 ↑	672 z	677 z	664 z	666 z	672 ↑
18	687 ↑	672 ?	685 z	670 z	618 ↓	394 ↓	670 z	679 ↑	677 z	674 z	666 z	654 z	637 ↓	635 ↓
19	689 z	651 ↑	653 ↑	649 ↑	681 z	676 z	681 ↑	681 z	668 ↓	677 z	658 z	664 z	656 z	664 z
20	687 z	689 z	689 ↑	689 z	687 z	685 ↑	693 z	687 z	679 ↓	676 z	664 z	662 z	664 z	672 z
21	609 ↓	676 ↓	651 ↑	658 ↓	618 ↑	574 ↓	563 ↓	531 z	607 ↑	662 ↓	641 ↓	603 ↓	605 ↓	745 ↓
22	591 ↑	658 ↓	610 ?	544 ↑	416 ↑	440 ↑	582 ↓	553 ?	533 ↓	574 ↓	693 ↓	641 ?	674 ?	710 ↓
23	707 ↓	656 ↓	651 ↑	645 ?	654 ?	280 ↓	582 z	586 ↓	626 ↓	643 ↑	651 ↑	658 z	679 z	712 ↑
24	681 ↓	666 ↑	666 z	683 z	681 ↑	654 z	651 ↓	651 ↑	633 ↓	656 ↑	664 z	647 ?	641 z	660 z
25	656 ?	676 ↓	660 ?	660 ↓	654 z	593 ↓	626 ?	597 ↑	649 ↑	630 z	653 ↓	641 ?	628 ?	607 ↓
26	536 ↓	697 ?	546 ↓	695 ↑	714 ↓	668 ↑	645 ↓	685 ?	664 ↑	670 ?	660 ↑	653 ?	656 ↑	705 ↓
27	469 ↓	444 ↓	305 ↓	555 ↓	538 ↓	405 ↓	291 ↑	409 ↓	570 ?	307 ↑	565 ↓	662 ↑	681 ↓	703 ↓
28	567 ↑	618 ↑	635 ↑	624 ↓	601 ↑	599 ↑	534 ↓	603 ↑	442 ↓	666 ↓	624 ↓	679 ?	681 ↓	678 ↑
29	551 ↑	533 ↓	610 ↓	446 ↑	620 ↑	607 ↓	351 ↓	429 ↓	500 ↓	589 ↑	643 ?	679 ↓	728 ↓	769 ↑
30	612 ↑	362 ↑	589 ↑	620 ?	609 ↓	565 ↑	670 ↑	639 ?	679 ?	672 ?	674 ?	670 z	662 ↓	679 ?
31	679 ↑	489 ↑	485 ↑	510 ↓	557 ↑	582 ↑	620 ?	570 ?	601 ?	654 z	647 ?	678 ↓	672 z	666 ?
Mean -	·076205	5954	6125	6001	5930	5650	5860	5939	6104	6309	6485	6594	6716	6933

April 1883. Φ = + 62° 38′ 52″.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	681 ↓	666 ↓	664 ↑	653 ↓	601 ↑	559 ↑	674 ↓	683 ↓	689 ↑	681 ↓	683 ?	666 z	674 ↓	645 ↑
2	469 ↓	610 ↓	653 ↑	647 ↑	599 ↓	497 ↓	639 ↑	652 ?	591 ↓	555 ↑	674 ↑	670 z	662 z	689 ?
3	582 ↑	591 ↑	666 ↓	601 ↓	377 ↓	722 ↓	716 ↑	626 ↓	822 ↓	826 ↓	523 ↑	647 ↓	616 ↑	804 ↑
4	119 ↑	551 ↓	628 ↓	637 ↓	593 ↑	656 ↓	433 ↑	487 ↑	681 ↓	525 ↑	605 ↑	624 z	639 ↓	662 ↑
5	450 ↓	429 ↓	628 ↑	685 ↑	643 ↓	588 ↓	557 ↑	563 ↑	670 z	691 ↓	662 ↓	664 ↑	730 ↓	728 ?
6	653 ↓	506 ↑	626 ↑	643 ?	662 ?	607 ↓	576 ?	647 ↑	653 ↑	653 ?	649 ↑	683 z	664 z	628 z
7	674 ↑	666 ↑	678 z	683 z	681 z	689 z	689 ↓	689 z	683 z	670 z	664 z	654 z	649 z	645 ↓
8	624 ?	576 ↑	603 ↓	651 ?	531 ↑	589 ↑	514 z	472 ?	620 ↑	672 ↓	658 ?	676 z	653 ↓	662 z
9	670 ↓	712 ↑	563 ↑	695 z	635 ↓	470 ↑	651 ?	664 ↑	666 ?	681 ↑	685 z	656 z	651 z	653 ↓
10	679 z	683 z	679 z	660 z	586 ?	654 ↑	691 ↑	705 z	668 ↑	676 z	666 z	666 z	670 ?	693 ↑
11	512 ↓	681 ↑	660 ?	666 z	687 z	695 ↓	695 ↓	691 ?	701 z	687 ↓	689 z	651 ↓	662 ↑	664 ↓
12	618 ?	676 ↑	687 z	610 z	519 ?	493 ↑	632 ?	683 z	660 ?	681 z	651 z	651 ↑	662 ?	643 ?
13	383 ↑	572 ↓	597 ?	660 ↓	597 z	641 ?	616 ↓	679 z	664 z	643 ?	601 ↓	670 ?	670 ↓	689 z
14	683 z	689 z	683 z	681 ↑	685 ↓	685 ?	683 ↓	695 ↓	679 ↑	666 ↑	668 z	670 ↑	656 ↑	654 z
15	685 ↓	582 ↑	550 ↑	632 ↑	687 z	666 ↓	569 ↓	523 ↑	628 ↑	685 ↓	674 z	676 ↓	666 z	666 ↑
16	695 z	701 ↑	668 ?	516 ?	649 z	656 z	705 z	707 z	691 z	670 z	662 z	660 z	637 ↓	645 ↓
17	689 ↑	679 ↓	668 ↓	654 ?	614 ↑	668 z	687 ↑	693 z	685 z	679 z	672 ↑	664 z	656 ↑	662 ↑
18	591 ↓	531 ↓	674 z	599 z	641 ↑	525 ↑	586 ↓	595 ↑	641 ?	658 ?	662 z	672 ?	693 ↑	712 ↓
19	313 ↑	538 ↑	670 ↑	536 ↑	550 ↓	570 ↓	527 ↑	250 ↓	383 ↑	645 ↓	588 ?	664 z	743 ↑	765 ↑
20	666 ↑	311 ↑	603 ↑	672 ↑	728 ↓	639 ↓	614 ?	736 ?	666 ?	472 ?	525 ↑	708 z	685 ↓	635 ↑
21	679 z	693 z	676 ?	680 ?	624 ↑	672 z	703 z	701 z	693 z	691 z	678 z	674 z	666 ↑	666 z
22	687 ↑	658 ↑	681 z	681 z	658 z	660 ↑	656 ↓	647 ↓	664 ↑	678 ↓	674 ?	672 z	664 z	658 ↑
23	681 z	683 z	651 ↑	670 ↓	656 ?	668 ↑	660 z	683 z	685 ↓	681 z	672 z	664 ↑	670 ↓	666 z
24	712 z	708 ↓	708 z	716 z	724 ↓	703 ↑	689 ?	705 ↓	685 ↓	622 ↑	683 ↓	605 ↓	472 ↑	728 ↓
25	666 ↑	632 ↑	429 ↑	612 ↓	679 z	699 ↑	531 ↑	578 ↑	683 ↑	647 ↑	676 ↓	687 z	693 ↑	689 ↑
26	527 ↑	745 z	701 ↓	666 ↓	689 z	651 ↓	679 ↑	718 ?	550 ↓	540 ↓	632 z	662 ↓	734 ↑	775 ↓
27	726 ↓	670 ?	394 ↓	531 ↑	651 z	414 ↑	510 ↓	645 ↓	710 ?	716 ?	707 ?	703 ↑	668 z	728 ↑
28	628 ↓	701 ↓	691 ↓	654 ↓	603 z	643 ↑	645 ↑	693 z	693 z	676 z	691 ↑	707 z	672 ?	676 z
29	599 ↑	674 z	679 ↓	645 ↑	618 ↓	527 ↓	519 ↓	609 ↑	689 ↓	681 z	672 z	676 z	699 ↓	681 ↑
30	609 ↑	681 ↓	701 ↓	666 ↑	599 z	555 ↑	542 z	597 ↓	641 ↑	662 ?	649 ?	633 ↑	728 ↑	845 ↓
Mean -	·075983	6265	6386	6433	6255	6154	6196	6339	6611	6563	6532	6672	6668	6879

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Local Mean Time (Bifilar Magnetometer). *March* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
788 ↑	738 ?	782 ↓	788 ↓	722 ↑	610 ↓	641 ↑	588 ↓	605 ↓	506 ↓	570	788	160	628
676 ↓	786 ↓	741 ↑	769 ↑	724 ↑	720 ?	618 ↑	448 ↑	614 ↑	595 ↑	581	786	72	714
745 ↓	722 ↑	721 ↓	710 ↑	706 ?	718 ↑	666 ↑	708 ↓	637 ↓	601 ↓	645	757	390	367
689 ?	726 ?	701 ↑	736 ↑	716 ↑	788 ↑	732 ↓	618 ↑	489 ↓	544 ↑	654	788	366	422
677 ↓	677 ↑	701 ↓	679 ↑	691 ?	691 z	722 ↓	728 ↑	732 ↑	701 ↓	665	734	463	271
712 ?	720 ↑	753 ↓	732 ?	763 ↑	740 ↓	699 ↓	424 ↓	656 z	469 ↓	663	800	316	484
689 ↓	736 ↓	710 z	697 ↓	741 ↑	718 ↓	469 ↓	732 ↓	651 z	654 z	638	753	256	497
808 ↓	722 ↓	779 ?	740 ↓	695 z	679 ↓	487 ?	753 ↓	685 ?	664 ↓	651	826	388	438
695 ?	693 ?	676 z	685 ?	708 ?	747 ↑	745 ↑	745 ↓	710 ↓	674 ↓	659	753	349	404
728 z	724 ?	687 z	693 z	672 z	683 z	685 z	685 z	689 z	603 ?	649	728	442	286
668 z	676 ?	670 z	672 z	670 z	677 ↓	685 z	687 z	689 z	677 z	649	691	527	164
705 ↓	679 ↓	676 z	676 z	679 ↓	685 ?	628 ↑	−072 ↑	572 ↓	521 ↓	628	708	−108	816
666 ?	683 ?	664 z	676 ↓	670 z	695 z	687 z	670 ↓	645 ↓	622 ↓	641	710	349	361
677 ?	672 z	679 z	676 ↑	697 z	724 ↓	691 ?	670 ↓	662 ↓	586 ↑	627	724	232	492
664 ↑	683 ↓	668 z	666 z	670 z	676 z	679 z	695 z	555 ↑	502 ↓	658	695	440	255
668 z	666 z	674 ↑	683 z	695 z	699 z	697 z	701 z	683 ↓	593 ↑	667	708	589	119
641 z	685 z	699 ↓	683 ↓	697 z	679 ↓	708 ↓	695 ?	687 z	685 ?	668	714	533	181
670 z	668 ↓	666 z	664 z	664 z	670 z	674 z	697 ↓	693 z	697 z	657	701	394	307
666 z	668 z	670 z	676 z	683 z	691 ?	695 z	697 ↓	691 z	689 z	673	699	637	62
681 z	683 z	681 ↓	679 ?	679 z	699 ↓	691 ↑	647 ↓	440 ↑	662 ↑	669	710	429	281
743 ?	777 ↑	824 ↓	705 ↓	548 ?	658 ↓	597 ↓	546 ↓	574 ↑	292 ↑	625	824	223	601
677 ↓	697 ↓	714 ↑	796 ↓	749 z	708 ?	685 ↓	281 ↓	209 ↑	666 ↓	600	808	46	762
683 ?	691 ?	722 ?	736 ↓	710 z	724 ?	736 ↓	701 ↓	593 ↑	565 ↑	649	751	280	471
687 ?	691 ?	681 z	701 ↓	751 ?	761 ?	687 ?	664 ↑	691 ?	647 ↑	674	761	607	154
653 ?	660 ↓	664 ↓	685 ↓	712 ↑	699 z	681 ↓	685 z	626 ↑	425 ↑	642	716	422	294
763 ↓	796 ?	660 ↑	745 ↑	622 ↓	403 ↓	800 ?	728 ↑	656 z	588 ↓	664	806	390	416
771 ↑	792 ↓	730 ↓	779 ↓	720 ↑	668 ↓	499 ↓	593 ?	357 ↑	−134 ↑	528	818	−480	1298
712 ↓	683 ↓	740 ?	788 ↓	814 ↑	691 ?	470 ↓	538 ↓	628 ↓	676 ↓	637	839	370	469
683 ?	736 ↑	779 ↑	786 ↓	771 ↓	697 ?	736 ↑	689 ↓	666 ↓	597 ↓	633	808	326	482
678 ↓	676 ↓	714 ↑	718 ?	741 z	689 ↓	726 ↑	697 ↓	693 z	693 z	655	740	320	420
685 ↑	643 ↑	712 z	712 ↓	736 ↓	755 ↑	788 ↓	679 ↓	519 ↑	622 ↑	635	788	476	312
6984	7048	7077	7139	7037	6917	6679	6231	6128	5768	·076408	·07839	·06520	·01319

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. *April* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
664 z	676 ↓	679 ↓	672 ?	678 ?	708 ↑	705 ?	630 ↓	730 ↑	658 ?	667	732	559	173
703 ?	726 ↑	759 ?	691 z	678 ↓	681 z	685 ↑	685 ↓	664 ↓	361 ↑	635	759	269	490
683 ?	626 ↓	618 ↑	668 ↑	782 ↓	595 ↑	710 ↓	610 ↑	651 ↓	651 ↑	654	830	322	508
749 ↑	679 ?	701 z	734 ↑	701 ↓	716 ↓	691 ↑	666 ↓	626 ?	595 ↓	612	751	9	742
708 ↓	722 ?	685 ?	660 z	769 ↑	693 ↑	743 ↓	645 ↓	385 ↑	628 ↓	638	771	333	438
651 z	679 ↑	703 ↓	674 ↓	676 ?	674 z	678 ↓	683 z	695 z	645 ?	649	703	424	279
660 ↑	656 ↓	693 z	681 ↑	689 ↑	708 ↓	710 ↑	741 ?	736 ?	695 ↑	682	745	645	100
676 z	714 z	695 z	687 z	681 z	681 z	683 z	708 z	697 z	687 z	642	714	470	244
653 z	654 ↑	662 z	695 ↓	689 z	697 z	676 ↓	676 z	678 z	679 z	658	714	470	244
689 ↑	722 ↑	775 ↓	765 ↓	790 ?	736 ?	736 z	656 ↑	612 ↑	589 ↓	685	798	582	216
664 z	670 ↓	676 ↑	701 ↑	691 z	714 z	697 ↓	687 ↓	422 ↑	586 ↑	660	714	422	292
658 ?	668 ?	660 ?	660 ?	672 z	681 ↓	691 z	681 z	691 ↓	645 ↓	648	693	480	213
691 z	678 ↓	728 ↓	710 ?	710 ↓	707 ?	736 ?	707 z	695 z	697 z	655	740	383	357
656 z	658 z	666 z	678 z	678 z	681 z	683 z	689 z	689 z	685 ↑	676	697	654	43
681 ↑	674 z	775 ↓	745 ↓	714 z	755 ↓	789 ↑	747 ?	701 z	699 ?	673	794	523	271
651 ↓	664 z	676 ↑	678 ?	703 z	705 ?	708 ↓	645 ?	591 ↓	691 z	665	708	512	196
664 ?	672 ?	668 z	676 z	676 z	681 z	681 z	683 z	681 z	693 z	672	693	607	86
822 ↓	771 ↑	812 ↑	849 ↓	792 ↑	666 ↓	633 ↓	390 ↓	630 ↓	633 ↓	657	851	344	507
853 ↓	681 ↓	589 ↑	681 ↑	654 ↑	647 ↓	388 ↑	726 ?	542 ↓	584 ↓	587	865	−166	1031
651 ?	660 ?	681 z	695 z	728 z	724 z	695 ↑	681 ↑	641 ↑	676 ↑	645	741	260	481
670 z	674 z	672 z	674 ?	678 ?	687 z	683 z	681 z	685 z	681 z	678	705	580	125
662 z	666 ?	685 ?	681 ↑	689 z	678 z	681 z	683 z	679 z	678 z	671	705	643	62
672 z	676 z	683 ↑	678 z	683 z	689 z	693 ?	701 z	712 z	708 z	678	712	647	65
620 ↓	614 ↑	624 ↑	595 ↑	586 ↓	685 ?	676 z	747 ↑	693 ↓	707 ↓	667	816	472	344
859 ↓	759 ↓	701 z	790 ↑	714 ↓	643 ↑	499 ↓	459 ↓	508 ↑	512 ↑	639	859	203	656
798 ?	784 ↑	824 ↓	773 z	788 z	701 ↑	689 ↓	605 ↓	392 ↑	743 ↑	681	824	392	432
743 ↓	693 ↓	724 ?	718 ↓	728 ↑	724 ↓	695 ?	645 ↓	624 ↑	563 ↑	651	743	366	377
687 ↑	716 ↓	708 z	720 z	697 z	695 z	695 z	693 z	703 z	653 ↑	680	724	603	121
722 z	722 ↓	710 ↓	674 ↓	681 ↓	730 z	734 z	741 ↓	685 ↓	664 ↓	668	743	450	293
687 ↓	647 z	672 z	674 z	703 ↑	740 ↑	743 ↓	662 ↓	685 ↑	570 ↑	662	849	542	307
6982	6867	6968	6992	7033	6941	6835	6651	6374	6419	·076583	·07865	·06834	·01031

May 1883. 0·07000+ (C. G. S. Units). $\Phi = +62^\circ\ 38'\ 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	676	647	651	521	647	689	679	653	656	639	691	701	730	743
2	540	658	660	676	485	383	446	609	703	685	699	699	757	720
3	586	529	555	656	455	685	693	708	697	689	697	705	697	678
4	691	519	536	519	651	701	701	697	672	670	678	662	662	720
5	674	691	695	674	630	544	563	660	654	649	637	614	701	745
6	632	668	658	707	649	548	614	718	679	693	676	668	681	705
7	666	681	668	647	697	672	672	728	658	653	691	679	705	685
8	708	722	437	576	643	626	662	697	697	712	681	670	689	757
9	651	563	582	676	666	676	705	687	664	672	693	676	701	679
10	683	687	674	695	689	701	693	691	656	683	674	653	676	672
11	497	612	610	630	603	589	687	706	697	689	683	676	672	672
12	643	679	666	691	706	693	703	691	679	681	679	666	662	668
13	658	691	674	697	695	622	565	582	610	674	685	677	677	681
14	708	664	622	664	703	651	605	708	699	677	699	695	679	676
15	593	639	597	605	603	666	633	651	651	681	695	697	674	672
16	670	722	753	732	730	745	687	461	484	649	681	685	679	679
17	710	601	551	687	687	716	708	626	679	674	676	705	699	681
18	687	672	672	580	595	593	658	691	699	693	668	679	697	714
19	691	691	722	635	653	278	403	502	622	608	691	701	693	689
20	666	732	649	597	591	656	683	651	699	664	609	681	705	765
21	340	660	628	−056	386	612	095	292	712	745	685	828	863	841
22	348	635	649	654	529	591	555	586	681	705	722	662	720	740
23	622	620	609	668	637	605	649	499	635	693	689	664	672	660
24	597	561	553	597	624	576	570	656	676	691	664	656	666	693
25	633	664	666	662	679	618	649	683	685	664	674	670	687	706
26	544	639	620	767	561	593	697	563	641	653	653	666	708	643
27	574	620	645	643	544	461	679	710	689	676	645	689	699	837
28	540	630	658	591	482	567	609	422	497	683	689	677	664	695
29	469	630	674	683	624	540	628	519	654	664	679	676	666	687
30	654	563	622	572	610	605	534	630	614	658	681	677	705	709
31	701	695	658	658	591	633	633	670	672	679	660	677	641	660
Mean -	·076146	6447	6327	6227	6144	6076	6148	6241	6584	6757	6782	6816	6944	7075

June 1883. $\Phi = +62^\circ\ 38'\ 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	689	681	670	353	679	703	632	603	643	635	653	658	666	703
2	693	586	651	578	593	263	476	037	500	499	695	705	720	761
3	589	542	626	666	712	703	677	521	523	697	685	668	677	710
4	626	672	705	708	534	580	593	706	699	679	683	672	668	666
5	681	662	641	679	695	699	691	703	687	681	679	679	670	685
6	584	094	112	533	599	578	425	586	662	666	708	773	826	802
7	699	681	676	672	668	614	624	677	677	677	674	676	662	736
8	693	697	666	624	383	508	452	609	660	656	630	660	662	656
9	531	603	660	633	612	359	440	607	689	672	670	685	714	734
10	683	658	656	632	649	610	601	651	676	660	651	681	695	736
11	645	588	672	693	676	666	707	718	685	707	707	712	705	670
12	705	693	693	679	668	512	624	660	718	712	685	681	674	695
13	658	679	689	699	699	691	699	668	712	738	689	685	676	678
14	538	697	681	653	676	656	578	612	687	656	660	664	662	681
15	693	695	701	691	701	708	695	695	689	668	637	637	656	672
16	697	687	681	722	699	703	720	701	683	658	639	641	643	683
17	687	645	632	346	569	708	550	550	599	647	693	660	674	653
18	614	362	557	454	548	612	599	485	645	736	705	681	765	855
19	722	716	561	516	687	620	639	653	534	664	653	668	678	740
20	740	643	651	699	632	674	651	654	555	653	701	651	620	670
21	676	687	689	701	699	718	701	695	662	656	656	647	633	653
22	710	703	697	712	607	649	656	516	563	633	641	714	643	658
23	664	672	409	610	551	563	487	637	710	689	693	685	794	767
24	707	654	679	668	681	641	645	653	639	664	685	664	687	679
25	683	676	628	618	670	555	557	607	569	678	630	668	666	726
26	081	437	622	550	555	705	580	331	569	668	670	674	693	710
27	703	−018	425	338	418	364	379	656	551	761	705	707	759	824
28	572	645	668	572	605	589	689	512	656	693	695	681	662	664
29	551	586	624	687	697	678	662	607	666	681	672	662	670	670
30	626	519	645	635	230	088	223	567	484	597	714	740	738	824
Mean -	·076380	5947	6222	6107	6097	5906	5884	5959	6331	6694	6753	6793	6886	7120

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Local Mean Time (Bifilar Magnetometer). *May* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
810 z	656 ?	879 ↑	861 ↓	620 ↓	833 ↓	668 ↓	724 ↓	685 z	203 ↓	677	901	176	725
732 ↓	769 ↑	714 z	738 ?	732 ↓	740 ↑	794 ↑	734 ↓	708 ?	610 ↓	666	794	318	476
726 ?	712 ↑	728 ↑	732 ?	745 z	806 ↓	814 ↓	734 ↑	714 ↓	701 z	685	816	448	368
699 ↑	716 ↑	712 ↓	763 ?	701 ↑	738 z	759 ?	745 ↓	720 ↓	674 ↓	679	763	433	330
720 z	703 ?	691 ↑	759 ?	708 ↓	689 z	745 ↑	734 ↑	586 ↑	649 ↑	671	761	538	223
664 z	685 z	693 ?	695 ?	745 ↑	779 ?	705 ↓	645 ?	316 ↑	561 ↑	657	779	316	463
691 z	693 z	689 ↓	687 z	699 ↓	720 ?	716 z	689 ↓	706 ↓	701 z	686	728	597	131
779 ↑	720 ?	674 ?	660 z	672 z	703 z	716 z	683 z	683 ↓	683 ↑	677	810	425	385
689 z	689 z	695 ↑	703 ?	685 z	734 ↓	740 ↓	716 ↑	710 ↓	689 z	680	740	563	177
689 z	679 z	718 ↑	745 ↓	720 ↑	699 z	712 ↓	703 z	701 z	612 ↑	687	765	612	153
676 z	699 ↑	712 ↑	732 z	734 ↑	767 ↓	759 ↓	720 ↓	569 ↑	599 ↑	666	771	489	282
658 ↓	656 ↑	681 z	695 z	691 z	703 z	714 z	697 z	681 ↑	593 ↓	678	714	586	128
687 ↑	670 ↑	767 z	837 ↓	839 ↑	881 ↓	759 ↓	736 ↓	734 ↓	703 ↓	700	887	559	328
676 z	683 z	685 z	695 z	687 ↑	726 ↓	743 ↓	697 ↓	672 ↓	653 ↑	682	743	593	150
687 z	687 z	706 z	701 z	732 z	765 ?	769 z	757 ↑	716 ↓	620 ↑	674	769	593	176
689 z	691 ↓	689 z	683 ?	679 ↑	687 z	689 ↓	689 z	689 z	691 z	676	755	429	326
747 ?	938 ↑	954 ↑	903 ↓	724 ↓	743 ?	708 ↑	703 ↓	691 ?	679 ↓	716	1019	551	468
726 ↓	685 ?	687 ↓	706 ?	687 z	693 z	716 ?	656 ↑	553 ↑	666 ↑	669	728	546	182
674 ↓	705 ?	658 ↑	674 ↓	672 z	679 ?	732 ↑	641 ↑	706 ↓	683 ↑	641	738	278	460
738 ↓	881 ?	708 ↓	647 ↑	551 ↑	555 ↓	599 ↑	563 ↑	452 ↑	283 ↑	638	897	283	614
833 ↑	859 ↓	674 ↑	782 ↑	597 ↑	779 ↑	614 ↓	710 ↑	624 ↑	182 ↓	595	934	−058	992
780 ↑	822 ↓	853 ↑	818 ?	767 ↑	736 ↑	603 ↑	716 ↑	359 ↑	599 ↑	659	853	338	515
708 ↑	769 ↑	720 ↓	701 ↓	693 ↓	716 ?	720 ↓	720 ↓	710 ↓	681 ↓	669	773	474	299
708 z	802 ↑	775 ↓	722 ↓	714 ↑	732 ↓	722 ↑	710 ↓	533 ↑	476 ↓	653	804	459	345
738 ↑	788 ↓	679 ↓	747 ↑	732 ↑	788 ↓	712 ?	712 ↑	710 ↓	455 ↓	682	794	407	387
681 ↓	674 ↑	677 z	824 ↓	757 ↓	701 z	658 ↓	588 ↓	668 ↑	641 ↓	659	830	342	488
883 z	734 ?	826 ↑	814 z	749 ?	747 ?	633 ↑	757 ?	687 ↓	645 z	691	883	435	448
691 z	701 ↓	767 ↑	736 ?	724 ↓	753 ↓	706 ↑	681 ↓	491 ↓	632 ↑	637	777	333	444
672 ?	676 z	664 ↑	689 ↑	745 z	730 ↑	759 z	728 ↓	683 ↓	691 z	659	759	469	290
761 ?	701 ↓	722 ↓	753 ?	753 ↑	773 ↑	816 ↑	693 ↓	565 ↑	689 ↓	671	818	514	304
672 ?	693 ↓	736 ↓	769 ↑	784 ↓	784 ↓	745 ↓	510 ↑	728 z	712 ↓	681	784	510	274
7188	7270	7269	7413	7109	7380	7176	6936	6371	6018	·076702	·08019	·06942	·01077

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. *June* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
712 ↑	804 ↓	881 ↑	903 ↓	857 ↓	786 ?	740 ↓	469 ↓	570 ↑	668 ↓	681	920	353	567
808 ↓	926 z	790 ↓	745 ?	794 ↑	718 ?	701 ↓	734 ↓	666 ↑	699 ?	639	926	−174	1100
666 ?	708 ↓	691 ↑	718 z	712 ↑	724 ↑	714 ↑	685 ↓	637 ↑	618 ↑	661	732	514	218
668 ↓	681 ↓	708 ↑	730 ?	730 ↑	693 ↓	681 z	685 z	683 ↓	691 ↓	672	734	529	205
681 ?	683 ↑	679 ↓	708 ↓	699 z	765 ↑	736 ↓	681 ↑	637 ↑	664 ↑	686	767	635	132
832 z	794 ↓	897 ?	798 ↓	818 z	728 ↑	769 ↑	736 z	668 ↑	457 ↑	643	899	−089	988
736 z	699 ?	820 ?	788 ↓	802 z	824 ?	786 ?	759 ↑	745 ↓	712 z	711	824	610	214
738 ↑	765 ?	804 ?	718 z	714 ↓	782 ↑	714 ↓	699 ↓	777 z	701 ?	665	806	377	429
710 ?	720 z	757 ↑	784 ↓	714 ↓	656 ↑	676 z	679 ↓	689 ↑	689 z	653	788	359	429
781 z	707 ↑	732 ?	759 z	812 ↑	798 z	775 ↑	687 ↓	601 ?	651 ↑	689	822	599	223
683 ↓	676 ?	672 ?	672 ↑	685 ↓	678 z	687 z	691 ↑	697 z	695 ↑	682	718	584	134
685 z	687 ↑	685 ↑	681 ↑	679 z	681 ↑	732 ↑	489 ↓	622 ↑	689 ↓	667	736	459	277
681 z	761 ↓	808 z	769 z	784 ↑	757 ↓	734 ↓	703 ↓	572 ↓	218 ↑	685	808	218	590
693 ↓	699 z	701 ↑	738 ↑	753 z	699 ↓	683 z	691 z	699 z	693 z	672	753	234	519
677 ↑	678 ↓	740 z	726 ↓	716 ↓	685 z	674 ↓	678 z	685 z	693 z	687	741	635	106
703 ↑	710 ↑	732 ↑	958 z	781 ↓	722 ↑	818 ↓	718 ↑	716 ↑	641 ↓	710	958	574	384
792 ↑	853 ↓	857 ↓	835 ↓	743 ↓	781 ↓	705 ?	381 ↓	140 ↓	463 ↓	631	1057	131	926
771 ↑	767 ?	833 ↓	743 z	775 ↑	749 ↓	794 ↓	616 ↓	414 ↑	651 ↓	655	859	184	675
796 ?	740 ↑	794 ↓	775 ↓	730 ↑	730 ↑	730 ↑	582 ↓	603 ↓	467 ↑	666	798	16	782
786 ↑	893 ↑	915 ↑	878 ↓	792 ↑	812 ↓	741 ?	502 ↑	651 ↑	683 ↑	702	938	437	501
687 z	699 ↑	708 ?	726 z	674 ↓	670 z	681 z	681 ↓	691 z	683 z	682	726	630	96
710 ↓	653 ↑	660 ↓	812 ↑	736 ↓	681 ↓	741 ↑	651 ↓	346 ↓	538 ↓	651	863	252	611
767 ↓	769 ?	786 ↓	889 z	818 ↑	728 ↑	724 ?	707 ↑	708 ↑	699 ↑	688	889	394	495
676 ↑	722 ?	792 ↑	765 ↓	736 ↑	724 ↑	693 ↓	738 ↑	701 ?	691 z	691	800	635	165
703 ↑	769 ↓	893 ↓	761 ↓	707 ↓	678 ↑	678 z	687 z	697 z	534 ↑	668	893	478	415
701 ↑	651 ↑	689 ↑	699 ?	701 ?	703 ↓	714 ↑	678 ↓	672 ↑	691 ↑	614	757	58	699
705 ?	765 ↓	942 ↑	830 ↑	779 ↓	751 ?	586 ↑	736 ↓	773 ↑	718 ↑	631	954	−041	995
699 ↓	695 ↓	712 ?	712 z	683 z	712 ↑	712 z	707 z	714 ↑	685 ↓	663	722	504	218
720 ↑	740 z	802 ?	761 ↑	769 ↓	794 ↓	714 ↓	779 ↑	691 ↓	710 ↓	691	802	551	251
946 ?	720 ↓	595 ↑	610 ↑	869 ↑	782 ↓	649 ↑	633 ↑	649 ↑	691 ↓	615	948	−002	950
7304	7378	7692	7664	7521	7330	7161	6621	6371	6361	·076688	·08057	·06826	·01231

July 1883. 0·07000 (C. G. S. Units). $\Phi = +\ 62^\circ\ 38'\ 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	499 ↓	544 ↑	670 ↑	641 ↑	597 z	637 ↓	467 ↓	370 ↑	523 ↑	580 ↑	632 ↑	649 ↑	730 z	830 ↑
2	689 ↓	687 ↓	574 ↓	523 ?	630 ?	718 ?	708 z	726 z	679 ↑	662 ↓	576 ↑	681 ↓	670 ↓	685 z
3	676 ?	329 ↑	485 ↓	551 ↑	614 ↓	628 ?	591 z	610 ↑	653 ?	664 ?	664 ↑	668 ?	697 ↑	687 ?
4	697 ↑	651 ↑	649 ↓	656 ↑	639 ↑	607 ↓	548 ↑	678 ?	699 ↓	697 z	683 ↓	681 z	687 ↓	691 z
5	480 ↑	632 ↑	651 ↑	651 ↓	512 ↓	533 ↑	399 ↑	512 ↑	574 ↑	610 z	670 ↓	678 ↑	705 z	714 ?
6	653 ↑	693 ↑	689 ↑	685 ↓	664 ↓	685 ↑	718 ↑	728 z	726 ↓	660 z	668 z	658 ?	654 ↓	674 z
7	664 ↓	666 ?	705 z	705 ↑	705 ↑	695 ↑	691 ?	651 ↑	519 ↑	444 ↑	584 ↑	678 ↓	660 ↓	689 ?
8	734 ↓	620 ↑	728 ↑	782 ↑	784 ↓	697 ↑	574 ↓	463 ↑	582 ↑	710 ↓	664 ↑	679 z	685 ↓	697 ↑
9	687 ↓	699 ↑	703 z	685 z	734 ↑	689 z	689 ↓	668 ↓	679 ↑	683 ↓	656 ↑	670 ↓	672 ↓	647 z
10	465 ↓	516 ↑	544 ↑	720 ?	751 ↑	695 ↓	712 ↑	722 ↑	708 ↑	685 ↓	691 ↑	701 ↑	662 ↑	712 ↑
11	693 ↑	605 ↓	643 ↓	654 ↑	679 ?	720 z	718 ↑	695 z	695 ↓	697 z	668 ↑	683 ↓	699 ↑	705 ↓
12	504 ↓	601 ↑	670 z	664 z	687 ?	628 ?	654 ?	672 ?	691 z	689 ↑	687 ↓	666 ↑	674 ↓	681 ?
13	553 ↑	531 ↑	569 ↑	508 ↑	618 ↓	523 ↑	523 ↑	546 ↑	637 ↑	633 ↑	678 ↑	651 ↑	726 ↑	664 ↓
14	601 ↓	569 ↑	514 ↓	658 ↑	519 ↑	635 ↓	469 ↑	229 ↑	582 ↓	689 ↑	678 ↑	660 ↑	672 ↑	670 ↑
15	683 ↑	674 ↓	664 z	683 z	693 z	708 ↓	637 ↓	493 ↓	128 ↓	124 ↑	734 ↓	664 ↑	639 z	703 ↑
16	647 ↑	726 ↓	548 ↓	559 ↑	620 ↑	651 ↑	567 ↑	398 ?	459 ↓	567 ↑	633 ↑	685 ↑	695 ↓	755 ↑
17	676 ↓	605 ?	649 z	701 z	687 ?	693 z	628 ↑	664 ↑	691 z	666 ↑	666 z	654 ?	658 ?	668 z
18	609 ↑	245 ↑	586 ↑	570 ↓	588 ↑	162 ↑	516 ↓	660 ↑	728 ↑	603 ↓	559 ↓	584 ↓	635 ↑	656 ↓
19	666 ↓	710 ↓	674 ↑	653 ↓	512 ↑	626 ↑	687 ↓	643 ?	678 z	674 ↓	660 ↓	666 ↑	728 z	779 ↑
20	618 ↑	578 ↑	683 ↑	639 z	620 z	607 ↓	643 ?	693 ?	687 ↓	653 ↑	662 z	654 z	635 z	632 ?
21	578 ↑	672 ↓	685 ↑	695 z	689 z	706 z	699 ↓	689 z	666 z	643 z	630 ↑	620 z	622 z	639 ↓
22	679 z	672 z	676 z	691 z	705 z	703 z	703 z	697 z	679 ?	660 ↓	637 z	632 z	628 z	643 z
23	593 ↓	620 ↑	645 ↓	651 z	716 z	714 z	714 z	705 z	693 z	676 ↓	653 z	643 z	643 z	653 ↓
24	681 ↑	628 ↓	620 ↓	533 ↑	670 ↑	618 ?	572 ↑	626 ↑	392 ↓	514 ↑	649 ↓	728 ↓	703 ↓	736 ↓
25	697 ↓	685 z	533 ↓	563 ?	517 ↓	567 ?	616 ?	681 z	716 ↑	701 ↑	683 ?	683 z	697 z	670 z
26	689 z	708 z	678 ↓	584 ↓	525 z	508 z	593 z	542 ?	512 z	601 ↑	643 ↓	767 ↑	765 ↑	732 ↓
27	670 ↑	703 ↓	664 ?	653 z	697 ↓	616 ↓	569 ↑	500 ↑	651 ↑	693 ↑	701 z	679 z	691 z	678 z
28	679 z	679 z	679 z	676 z	685 z	637 ↓	578 ↓	668 ?	689 z	689 z	693 z	691 ↑	687 z	683 z
29	674 ↑	582 ↑	658 ↓	693 ↑	683 ?	691 ?	672 ↓	697 ↓	676 ↑	674 ?	664 ?	679 ↑	662 z	662 ↓
30	714 ↓	712 ↓	743 ↑	162 ↓	058 ↑	422 ↓	480 ↑	645 ↑	476 ↑	429 ↓	654 ↑	705 ↓	915 ↑	934 ↑
31	504 ↑	599 ↓	569 ?	407 ↑	497 ↑	407 ↑	281 ↓	182 ↓	311 ↑	326 ↑	318 ↑	666 ?	736 ↑	687 ↑
Mean -	·076326	6175	6338	6192	6224	6170	6005	5953	6058	6128	6464	6711	6881	6986

August 1883. $\Phi = +\ 62^\circ\ 38'\ 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	624 ↑	291 ↑	274 ↑	628 ↑	687 ↑	695 z	712 ↓	457 ↓	454 ↑	519 ↑	668 ↑	703 ↑	743 ↑	824 ↑
2	656 z	653 ↑	620 ?	609 ?	601 ↓	660 ↓	664 z	691 ↑	687 ↓	674 z	664 z	654 z	685 z	668 ↑
3	658 ↑	565 ↓	567 ↓	586 ↓	666 z	699 ?	699 z	685 z	679 z	633 z	635 z	624 z	632 ↑	672 z
4	653 ↑	678 z	678 z	672 ↑	656 ↓	637 z	701 ↑	703 ↓	693 z	683 ↓	666 z	660 ?	658 z	660 z
5	544 ↑	664 ↓	614 ↓	626 ↓	662 ↑	605 ↑	542 ↑	469 ↑	683 ↑	609 ↑	656 z	662 z	643 ↑	660 ↓
6	658 ↑	422 ↑	521 ↑	578 ↑	668 ↓	777 ↑	531 ↓	390 ↓	506 ↓	548 ↑	630 ↓	678 ↑	808 ↑	917 ↑
7	701 ↓	653 ↑	662 ↑	674 ?	683 z	653 ↓	372 ↑	548 ↑	605 ?	645 z	679 ↑	678 ↑	695 z	697 ?
8	664 ↓	676 ↓	689 z	716 ?	726 ?	660 ↑	546 z	645 ↓	685 ?	705 ↑	689 z	695 ↓	676 ↑	681 ↑
9	632 ↑	666 ↑	656 ↑	674 ?	635 ↓	672 z	685 z	676 ↑	689 ↓	679 z	672 z	670 ↓	664 z	668 z
10	679 z	685 ↓	689 z	699 z	689 z	710 z	701 z	689 ↑	676 z	668 ↑	666 ↓	660 ↓	679 ?	681 ↓
11	683 ↓	697 ↑	614 ↓	570 ?	597 ↓	593 ↑	589 ↓	643 ↓	574 ↑	703 ↓	699 ↓	693 ?	687 ↓	724 ↑
12	645 ?	668 z	664 ↓	670 ↓	653 ↑	670 ?	647 ↑	601 ↓	601 ↓	630 ↑	645 ↓	643 ↑	660 ?	699 z
13	691 z	649 ↓	630 ↑	584 ?	662 ↑	656 ↓	687 z	656 z	674 z	670 z	660 z	668 z	662 z	697 ↑
14	418 ↑	595 ↓	693 ?	718 ↑	658 ↑	678 z	676 ↑	666 ↑	658 ?	674 ↑	656 ↓	668 ↑	693 ↑	804 ↑
15	706 z	734 ↓	757 ↑	705 z	705 ↓	706 ↓	705 z	693 z	691 z	685 z	677 z	679 z	681 z	681 z
16	695 z	697 z	703 ↓	683 ↑	707 z	710 ?	695 ↓	707 ?	697 z	678 ?	676 z	668 z	670 z	672 z
17	691 z	693 ↓	691 z	689 ↑	687 z	687 ↑	693 z	693 ↓	679 z	653 ↓	637 ↓	633 z	630 z	714 ↓
18	607 ↓	569 ↑	588 ↑	643 ↑	346 ↓	412 ↑	499 ↑	624 ↓	499 ↓	599 ↑	693 ↑	695 ↑	683 z	790 ↑
19	676 z	683 z	693 ↑	681 z	649 z	672 z	685 z	685 ↓	672 z	674 ↑	662 ↓	666 z	670 z	722 ↑
20	635 ↑	697 z	551 ↑	674 ↑	710 ↓	670 ↓	632 ?	701 ↑	693 ?	662 ↓	658 ?	678 ?	681 z	689 z
21	668 ↓	641 z	653 ↓	678 ↑	691 z	612 ↓	639 ↑	681 ↑	674 ↓	651 ?	672 z	658 z	666 ↓	681 ↑
22	691 ↓	607 ↑	628 ↓	612 ↑	628 ↓	572 ↑	685 ↑	639 ↑	658 ↓	607 ↑	674 ↑	651 ↓	707 ↓	722 z
23	689 ↓	664 ↓	624 ↓	429 ↑	601 ↑	628 ?	683 z	555 ↑	647 ↑	660 ?	616 ?	654 ?	699 ?	796 ↓
24	565 ↑	258 ↑	362 ?	474 ↑	597 ↓	595 ↑	624 ↓	567 ?	658 ↑	676 ↓	668 ↑	660 ↑	681 z	695 ↑
25	643 ↓	651 ↓	641 ↑	658 z	639 z	632 ↑	670 z	672 z	670 ↓	672 z	676 z	674 z	678 z	681 ↓
26	609 ↓	622 ↑	626 ↓	647 ?	647 ↑	647 ↓	679 z	681 z	678 ↓	676 z	672 z	678 z	681 z	685 ↓
27	643 ↑	651 ↑	670 ?	687 ↓	691 ↓	689 z	685 z	681 z	672 z	656 z	660 z	664 ↑	670 ↑	683 ↓
28	618 ↓	654 ↓	699 z	672 z	651 ↑	668 z	649 z	630 z	662 z	651 ↑	679 z	695 z	722 z	699 ?
29	683 z	685 z	687 z	689 ↑	405 ↑	531 ?	637 ↓	618 ↑	708 ↓	678 z	681 z	674 z	679 ↑	670 z
30	693 ↓	683 z	679 z	691 ↑	689 ↓	674 z	687 z	653 z	656 ↓	658 z	670 z	678 ↓	681 ↑	708 ↑
31	691 z	689 z	693 z	689 z	685 z	687 z	685 z	670 ↓	670 ↓	639 ?	658 z	664 ↑	664 z	676 ↓
Mean -	·076487	6271	6296	6453	6442	6502	6446	6345	6499	6521	6650	6685	6815	7102

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Local Mean Time (Bifilar Magnetometer). *July* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
942 ↓	691 ↑	425 z	662 ↓	584 ↕	726 ↕	588 ↕	531 ↕	565 ↑	586 ↕	610	942	370	572
633 z	678 z	676 z	736 ↕	747 ↕	714 z	691 ↓	649 z	643 ↕	666 z	668	779	523	256
777 ?	782 z	820 ↑	812 ?	873 ?	786 ↓	712 z	641 ↕	678 ↑	607 ↕	666	881	329	552
780 ↓	724 ↕	738 ?	730 ↑	749 ↕	732 ↑	730 ↑	699 ↕	616 ↕	533 ↕	678	780	531	249
841 ↕	946 ↑	994 ↕	871 ↓	802 ↓	794 ↕	777 ↑	743 ↓	645 ↕	674 ↑	683	1008	399	609
674 ?	670 ↑	810 z	765 ↕	784 ↑	666 z	685 ?	664 ↕	699 z	714 ↕	695	810	653	157
699 ↕	701 ↕	674 ↑	699 ↑	683 z	697 z	707 ↓	753 ↓	563 ↕	514 ↑	656	757	427	330
687 z	681 ↓	658 ↕	724 ↓	734 ↕	695 ↑	683 ↑	679 z	685 z	679 z	679	798	220	578
641 z	660 z	683 ?	820 ↕	788 ↕	765 ↕	685 ↑	693 ↕	691 ↓	569 ↑	689	833	555	278
708 ↓	707 ↓	998 ↑	540 ↑	861 ↓	781 ↑	705 ↕	681 z	674 z	666 ↑	691	1019	320	699
779 ↑	1051 ↕	609 ?	878 ↕	589 ↓	480 ↕	502 ↕	728 ↑	662 ?	412 ↕	676	1069	267	802
654 ↓	645 ↑	645 ↕	670 z	662 z	674 ↓	672 ↓	687 ?	654 ↕	499 ↑	651	693	405	288
685 z	732 z	818 ↑	743 ↑	701 z	710 z	676 ↑	689 ↑	672 ↓	670 ↓	644	820	482	338
664 ↕	666 z	630 z	683 z	672 z	672 z	676 z	679 z	685 ↕	536 ↕	612	720	193	527
897 ↑	837 ↓	703 ↕	689 ↕	757 ↓	759 ↓	517 ↓	373 ↑	555 ↕	689 ↓	625	897	110	787
837 ↓	687 ↕	699 ↓	771 ↓	753 ↑	810 ?	755 ↑	741 ↓	557 ↑	647 ↑	657	847	385	462
753 z	687 z	710 ↕	693 ↑	689 ↓	740 ↕	732 ↓	714 ↓	710 ↑	654 ↑	683	753	603	150
678 ↕	681 ?	919 ↓	917 ↕	584 ↕	718 ↕	728 ↕	521 ↑	563 ↓	605 ↑	609	919	142	777
922 ↑	812 ↓	804 ↓	816 ↕	798 ↕	802 ↑	726 ↓	521 ↕	588 ↑	668 ↓	700	930	502	428
647 ↕	695 ↕	693 ↕	699 ↓	691 ↓	668 ?	685 ↓	660 z	668 z	622 ↑	655	703	567	136
651 ↑	666 ↑	672 ↓	674 z	683 z	691 z	689 z	683 z	668 z	681 z	666	706	527	179
662 z	674 ?	676 z	741 ↑	755 ↑	701 z	678 z	716 z	626 ↕	553 ↕	674	765	521	244
641 z	653 ↑	678 z	699 ?	738 ↑	786 ↑	714 ?	691 ↕	674 ↕	601 ↕	674	788	499	289
810 z	788 z	847 ↑	782 ↑	678 ↓	804 ↑	736 ↕	722 ?	705 ↑	708 z	677	865	348	517
672 z	685 z	705 z	710 ↓	745 ?	716 z	707 ↓	689 ?	695 z	695 z	667	745	508	237
743 ↕	816 ↕	734 ↕	757 z	732 ↑	722 z	689 ?	565 ↕	285 ↕	630 ↑	646	818	232	586
670 z	676 ↕	676 z	679 ↓	674 z	681 z	681 ↓	683 z	697 ↓	687 z	665	706	495	211
678 z	687 ↑	666 z	679 ↓	687 z	705 ↕	749 ↓	722 ↕	757 z	678 ↓	684	759	567	192
660 z	672 ↕	738 ↕	1006 ↑	174 ↑	536 ↕	614 ↕	771 ↕	609 ↕	609 ↕	656	1059	−292	1351
1079 ↓	982 ↓	708 ↕	597 ↕	718 ↕	651 ↓	565 ↓	527 ↑	630 ?	493 ↕	625	1097	−273	1370
830 ↑	714 ↑	635 ↑	697 ↑	728 ↓	467 ↕	824 ↕	672 ↑	687 ↕	681 ↕	559	865	−004	869
7416	7338	7239	7400	7037	7048	6864	6609	6389	6202	·076591	·08097	·06708	·01389

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. *August* 1883.

3	4	5	6	7	8	9	10	11	12	Daily and Monthly Means.	Highest Reading.	Lowest Reading.	Difference.
822 ↕	796 ↑	845 ?	656 ↕	832 ↓	586 ↕	618 ↓	624 ↕	439 ↕	639 ↕	630	869	028	841
699 z	716 ↕	724 ↓	788 ↑	812 ↑	740 ↑	697 ?	674 ?	670 z	651 z	681	814	593	221
693 ↓	734 z	708 ↕	736 ?	759 ↑	745 ↑	716 ?	720 z	664 ↑	567 ↓	668	763	542	221
683 ↓	685 z	679 z	705 ↓	668 z	668 ↓	672 z	681 ?	679 ↓	681 z	675	710	610	100
759 z	664 ↓	679 ?	747 ↑	794 ?	822 ↕	757 z	697 ↕	660 ↓	476 ↑	653	824	437	387
942 ↓	763 ↕	681 ?	736 ↓	701 ↑	689 ↓	708 ↓	506 ↕	531 ↕	660 ↕	647	952	379	573
678 ↓	743 ↕	899 ↑	720 ↓	802 ↕	753 ↕	668 z	632 ↓	637 ↑	622 ↕	670	924	372	552
689 ↕	681 ↓	674 z	674 z	672 ?	672 z	678 z	691 z	561 ↕	622 ↓	669	728	536	192
676 z	676 ↑	676 z	683 z	674 z	670 ↑	678 ?	691 z	685 z	681 ↓	672	691	618	73
664 ?	695 ↓	777 z	822 ↕	755 ↕	792 ?	755 z	534 ↑	603 ↕	570 ↕	689	824	200	624
695 ↕	707 z	718 ↓	708 ↑	724 ↓	736 ↓	687 z	689 z	699 z	678 ↑	671	736	570	166
687 ↑	683 ↓	710 z	683 z	679 z	679 z	678 z	687 z	691 z	689 z	665	714	595	119
741 ↓	645 z	658 ↕	668 z	676 ↓	681 z	745 ↕	703 z	678 ↓	626 ↕	669	751	578	173
804 ?	824 ↑	996 ↓	738 z	730 ↑	773 ↓	751 z	751 z	724 z	703 ↓	710	998	409	589
689 z	683 ↑	676 ↕	672 ↕	672 ↕	672 ↑	681 z	685 z	670 z	697 z	691	757	670	87
689 ↑	691 z	689 ?	691 z	691 ↓	689 z	683 ↑	689 z	691 z	683 z	689	714	668	46
676 ↓	678 z	695 ↑	683 ↑	685 ↑	699 ?	712 z	693 z	666 ↕	658 ↑	679	714	624	90
904 ↕	940 ↕	879 ↕	708 ↕	808 ↕	812 ↕	796 ?	664 ↑	676 ↑	664 ↓	670	940	234	706
685 ↓	687 ↕	689 ↓	701 ?	755 ↓	738 ↓	712 ↓	707 ↑	605 ↕	514 ↕	678	757	364	393
687 z	695 ↑	710 ?	697 z	693 z	697 z	703 z	720 z	726 ?	678 ↕	680	732	551	181
720 ?	726 z	800 ↓	757 ↑	703 z	708 z	705 z	689 ↑	708 z	710 z	687	822	610	192
790 ↕	751 ?	832 ↓	728 ↕	718 ↑	705 ↓	718 ↓	639 ↓	637 ↓	726 ↕	680	837	565	272
695 ↓	672 ↓	802 ↕	773 ↓	740 ↓	755 ↓	626 ↑	639 ↕	626 ↑	557 ↕	659	814	418	396
710 z	681 z	681 z	676 z	695 ↑	708 ↓	685 ↓	738 ↕	769 ↕	658 ↕	628	769	256	513
676 z	691 z	683 ↓	674 ↓	674 z	674 z	687 z	691 z	693 ?	620 ↓	667	695	612	83
685 ↓	678 ↓	679 ↓	678 z	685 z	683 z	705 z	693 z	724 z	668 z	671	728	597	131
691 ↓	678 z	681 ↓	674 z	678 z	679 z	695 z	705 z	697 z	660 ?	676	705	643	62
743 z	681 ↓	670 ↓	645 ?	672 ↑	687 ↑	681 ↑	705 ↓	664 ↕	683 z	674	749	616	133
749 ?	759 ↓	714 ↓	734 ↑	693 ↑	693 ?	710 ↓	632 ↓	574 ↕	703 ↓	666	773	401	372
716 z	678 z	689 z	691 z	695 z	695 z	691 z	697 z	695 z	685 ?	684	718	651	67
670 z	703 ↑	712 ↓	707 ?	699 ↑	707 z	716 ↓	647 ↕	656 ↕	666 ↓	681	718	601	117
7228	7124	7324	7082	7172	7099	7005	6746	6580	6482	·076723	·07998	·07028	·00970

Vertical Intensity.

September 1882. 0·6100+ (C. G. S. Units). $\Phi = +62^\circ\ 38'\ 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1														
2														
3														
4														
5														
6														
7														
8	86 z	81 ↑	72 z	67 z	69 z	72 z	77 z	72 ↓	75 z	78 ↓	79 z	89 z	95 ↓	102 ↕
9	64 z	62 z	74 z	72 ↓	70 ↓	71 ↕	72 ↑	71 z	73 z	72 z	75 z	77 z	81 z	80 ↓
10	75 ↓	73 z	75 z	—*	—	—	—	—	—	83 z	82 z	83 ↕	84 z	84 z
11	77 ↓	83 z	85 z	86 z	85 z	84 z	82 z	82 z	82 ↑	82 ↑	83 ↓	79 ↑	84 ↕	83 ↑
12	84 z	84 z	86 ↓	86 ↕	85 ↓	83 ↓	83 ↑	83 ↕	84 ↑	82 ↑	81 ↓	82 ↕	83 ↓	84 ↑
13	87 ↕	81 ↕	95 ↕	93 ↓	95 ↓	91 ↓	87 ↕	84 ↓	83 ↕	79 ↕	83 ↕	87 ↕	86 ↓	86 z
14	84 ↑	107 ↓	92 ↓	88 z	83 z	85 ↕	83 ↕	90 ↑	83 ↑	82 z	83 z	84 z	84 ↕	84 ↓
15	91 ↕	87 ↓	84 ↑	88 ↕	88 z	81 ↓	80 z	82 z	81 ?	80 ?	80 ↑	79 z	80 z	81 ↓
16	80 z	80 ↑	78 z	80 z	81 ↓	80 z	77 ↑	78 z	78 z	80 z	80 ↓	78 ↑	79 z	79 z
17	79 z	80 z	79 z	83 z	81 z	82 z	81 z	80 ↓	80 z	78 z	80 ↕	81 z	82 z	82 z
18	79 z	80 z	80 z	81 ↓	81 z	81 z	81 z	77 ↓	78 ↕	75 ↑	78 z	80 ↑	81 ↑	82 z
19	82 ↓	81 ↕	82 z	81 z	83 z	82 ↓	80 ↓	80 z	80 z	80 z	80 ↑	80 ↓	81 ↓	84 z
20	93 ↑	88 ↓	84 z	88 z	86 z	83 ↕	81 ↓	82 z	82 ↓	83 z	82 z	82 z	84 z	84 z
21	84 z	95 ↓	89 ↑	84 ↓	84 z	84 ?	83 z	84 z	85 ↑	83 ↓	83 ↓	83 z	84 z	84 z
22	80 ↕	90 ↕	85 ↓	84 z	84 z	82 z	83 ↑	82 z	83 ↑	83 z	83 ↓	83 z	84 z	82 ↑
23	83 z	83 ↓	83 z	83 z	90 ↕	98 ↕	92 ↕	83 ↕	80 ↕	81 z	82 ↑	83 ↕	83 ↑	84 ↕
24	80 z	81 z	81 z	81 ↓	83 z	83 ↓	81 ↓	81 ↓	81 ↑	82 ↑	81 ↑	81 z	81 z	83 ↑
25	90 ↕	118 ↓	110 ↑	103 ↓	100 ↓	91 ↑	104 ↕	100 ↕	110 z	83 ↑	80 z	83 ↕	81 ↕	82 ↕
26	102 ↕	87 ↓	83 z	84 z	82 z	80 ↓	82 ↕	82 z	82 ↓	82 ↓	73 z	80 z	78 ↓	78 ↑
27	83 z	91 z	86 ↓	86 z	91 ↑	83 ↓	80 ↕	80 ↓	80 ↑	79 ↕	80 ↑	80 z	79 ↓	82 ↑
28	82 ↕	75 ↓	77 ↓	79 z	77 z	75 ↓	75 ↓	75 z	75 ↕	74 ↕	74 z	75 z	76 ↓	77 ↑
29	79 ↕	89 ↓	91 z	94 ↓	83 ↓	80 ↓	77 ↑	74 ↑	73 ↓	75 z	75 z	76 ↓	77 z	76 ↓
30	80 z	80 ↓	82 ↕	76 ↓	77 z	76 ↑	80 z	75 ↑	72 ↓	75 ↑	77 ↑	77 ↑	76 z	77 ↓
Mean -	·61871	850	840	840	835	821	819	808	809	796	797	803	819	826

October 1882. $\Phi = +62^\circ\ 38'\ 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	73 ↕	78 ↓	81 ↓	76 z	74 z	77 z	76 ↑	73 z	73 ↑	75 z	75 ↑	77 ?	77 ↑	77 z
2	81 ↑	82 ↓	121 ↑	123 z	122 z	120 ↕	119 z	89 ?	91 ↓	102 ↑	106 ?	117 ?	127 ↑	118 ↑
3	77 ↑	80 z	80 z	77 z	80 z	80 ↓	78 ↑	78 ?	74 ↕	75 z	78 ↓	80 ↓	78 z	80 ↑
4	73 ↕	77 ↕	88 ↑	92 ↓	77 ↑	77 ↑	77 ↕	90 ↓	77 ↓	69 ↕	75 ↕	82 ↕	77 ↓	82 z
5	79 ↕	80 z	78 z	81 ↕	79 z	80 ↑	78 ↕	82 z	77 ↓	78 ↕	72 ↓	73 ↓	70 ↓	61 ↕
6	100 z	102 z	102 z	103 z	105 z	105 z	102 ↑	103 z	105 z	87 ↓	81 z	82 ↓	81 z	80 ↑
7	79 z	78 z	78 ↓	76 ↓	76 ↕	77 ↓	78 z	78 z	78 ↕	79 z	80 z	76 ↓	77 z	78 z
8	78 ↓	80 ↓	78 z	80 z	80 z	80 z	80 z	79 z	79 z	78 z	78 z	78 z	78 z	78 z
9	77 z	78 z	81 z	84 z	81 z	81 ↕	83 z	78 z	77 z	76 z	75 z	76 z	72 ↓	75 ↕
10	81 ↕	83 ↑	95 z	95 z	95 z	89 ↓	81 ↕	77 ↓	79 ↓	81 ↑	82 ↑	81 ↓	77 ↓	80 ↓
11	81 ↕	82 z	87 z	81 ↓	85 ↕	80 ↕	80 ↕	72 ↓	78 z	78 ↓	78 ↑	81 ↕	80 ↕	81 ↓
12	78 ↑	82 ↕	84 z	77 z	81 z	78 z	78 z	78 z	78 ↕	80 ↓	79 ↕	78 ↕	78 ↓	78 z
13	83 z	80 z	78 z	78 ↓	78 z	79 ↑	77 z	77 ↕	74 z	82 ↕	75 z	77 z	78 z	78 z
14	80 z	81 z	74 ↓	71 ↑	65 ↕	64 z	64 z	63 z	62 z	61 z	63 ↑	67 ↕	75 ↑	75 ↑
15	80 ↕	79 ↓	86 ↑	113 ↓	105 ↑	92 ↕	76 ↕	91 ↑	76 ↓	72 ↑	75 ↕	76 z	77 ?	78 ↑
16	77 ↕	117 ↓	102 ↓	95 ↓	83 ↓	77 z	77 z	74 z	77 ↑	80 ↓	71 ↓	74 ↕	78 ↕	71 ↑
17	107 ↓	82 ↓	83 ↓	83 ↓	78 ↕	77 ↓	75 ↓	83 ↓	92 z	74 ↕	75 z	78 ↕	79 ↓	80 ↑
18	64 ↕	96 ↕	89 ↓	81 ↓	79 z	79 z	79 z	79 ↕	80 ↓	80 ↑	79 z	79 z	78 z	80 z
19	71 z	77 z	77 ↓	79 z	81 z	77 ↑	77 ↓	75 z	74 ↕	74 z	75 z	75 ↓	76 ↓	76 z
20	75 ↓	74 ↓	74 z	73 ↕	74 z	75 ↓	74 z	78 ↕	75 z	75 z	75 z	76 ↑	76 z	77 z
21	72 ↓	73 z	72 z	73 z	73 z	72 ↕	73 ↑	71 ↓	72 z	71 ↑	72 z	72 ↑	73 z	74 z
22	72 z	72 ↓	77 ↓	90 ↓	83 ↕	89 ↓	91 ↕	91 ↑	80 ↓	72 z	80 z	79 ↑	[77]	69 ↓
23	72 ↕	94 ↕	93 ↓	77 ↓	77 ↕	75 ↕	71 z	65 z	69 ↕	68 ↓	70 z	71 ↓	70 z	72 z
24	80 ↑	67 ↓	75 z	90 ↕	86 ↓	85 ↓	68 ↕	66 ↕	67 ↓	67 z	68 ↕	68 z	68 ↕	68 ↕
25	96 ↓	94 ↓	86 ↓	84 ↓	77 ↓	77 ↓	73 ↕	69 ↕	68 ↕	69 ↕	68 ↕	68 ↓	69 ↕	68 ↕
26	64 ↑	69 ↓	66 ↓	67 ↓	71 z	66 ↓	67 z	65 ↕	65 z	66 ↕	67 z	68 z	68 ↕	71 z
27	73 ↑	77 ↕	75 z	73 ↓	68 z	69 z	68 ↕	65 ↕	65 ↓	62 ↓	63 ↕	66 ↕	69 ↑	68 ↕
28	79 ↓	74 z	73 ↕	80 ↑	91 ↓	90 ↑	93 ↕	91 ↑	73 ↕	74 ↓	78 ↕	83 ↕	73 ↕	78 ↕
29	80 ↓	87 ↑	100 ↓	84 ↕	76 ↕	73 ↕	75 ↑	71 ↓	75 ↕	71 ↕	74 ↓	77 ↕	80 ↑	82 ↓
30	67 ↓	72 ↕	83 ↓	85 ↕	84 ↓	74 z	71 ↕	75 ↓	74 ↑	74 ↕	76 ↓	77 ↕	77 ↑	78 z
31	72 ↓	82 ↕	78 ↑	75 ↓	77 ↓	77 ↓	78 z	78 ↑	78 ↓	79 z	79 ?	79 z	80 ↕	80 ↕
Mean -	·61781	816	837	837	820	800	786	775	762	751	755	771	772	771

* Magnet accidentally displaced.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Local Mean Time (Balance Magnetometer). *September* 1882.

3	4	5	6	7	8	9	10	11	12	Daily Means.	Highest Reading.	Lowest Reading.	Difference.
102 ↓	105 z	106 z	106 z	73 z	75 z	74 z	72 z	68 z	67 z	81	106	67	·0039
80 z	84 z	87 z	88 ↓	87 z	85 z	84 z	82 z	80 z	77 z	81	88	62	·0026
83 ↑	85 z	86 z	94 z	89 ↓	88 ↓	77 ↑	96 ↑	78 ↓	84 ↑	83	96	73	·0023
86 ↑	83 z	82 ↓	84 z	72 ↓	64 ↑	69 ↑	83 ↑	87 z	83 z	81	87	64	·0023
85 z	86 z	84 z	85 z	77 z	69 ↑	76 ↓	78 ↑	50 ↓	69 ↑	77	86	50	·0036
85 z	85 z	85 z	85 z	85 ↑	79 ↑	79 z	80 ↑	85 ?	68 ↑	84	95	68	·0027
85 ↓	84 ↓	84 z	95 ↑	83 z	82 ?	80 ↓	76 ↓	64 z	58 ↑	83	107	58	·0049
80 z	81 ↓	82 z	93 ↓	80 ↑	80 z	77 ↑	82 z	80 z	81 z	82	93	77	·0016
81 z	79 ↓	82 ↑	94 ↓	80 z	83 z	77 ↓	70 ↑	77 ↓	81 ↓	79	94	70	·0024
83 z	82 z	84 z	83 z	82 ↑	82 z	82 ↓	82 z	81 z	81 z	81	84	78	·0006
86 z	83 z	84 z	84 ↑	83 z	84 ↑	81 ↓	77 z	80 ↓	82 z	81	86	75	·0011
85 z	84 z	83 ↓	86 ↑	85 ↓	84 z	81 ↓	81 z	82 ↑	81 ↑	82	86	80	·0006
83 z	81 ↑	81 ↓	80 ↓	84 ↑	83 ↑	82 ↓	80 ↓	78 z	81 z	83	93	78	·0015
85 ↓	84 ↓	84 ↑	84 ↓	84 z	84 z	84 z	83 z	84 z	85 ↓	84	95	83	·0012
84 z	84 ↓	85 z	85 ↓	85 z	85 z	85 z	81 ↓	81 ↑	82 z	83	90	80	·0010
85 z	82 z	83 ↑	84 z	83 z	86 ↑	83 z	84 ↓	83 z	79 ↓	84	98	79	·0019
82 ↓	84 ↑	84 ↑	84 ↓	73 z	61 ↓	74 z	76 ↑	71 ↑	85 ↑	80	85	61	·0024
84 ↑	84 ↑	82 ↑	83 z	83 z	79 z	75 ?	66 z	69 ↓	94 ↑	88	118	66	·0052
80 ↑	79 z	77 ↓	66 ↓	71 ↑	67 ↓	69 ↑	81 ↑	81 ↓	82 ↓	79	102	66	·0036
81 ↓	79 ↓	79 ↑	80 ↓	78 z	78 ↓	75 z	74 z	73 ↑	66 ↑	80	91	66	·0025
78 ↓	78 z	79 z	77 z	76 z	77 z	76 z	73 ?	63 ↑	68 ↓	75	82	63	·0019
77 z	77 z	77 ↓	77 z	76 z	77 z	77 ↓	77 ↓	71 z	70 ↑	78	94	70	·0024
75 ↓	75 z	75 z	76 z	73 ?	73 z	74 z	75 z	73 ↓	71 ↑	75	82	71	·0011
833	830	833	849	800	785	779	787	756	772	·61815	·6218	·6150	·0068

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. *October* 1882.

3	4	5	6	7	8	9	10	11	12	Daily Means.	Highest Reading.	Lowest Reading.	Difference.
77 z	78 z	79 z	79 z	80 z	78 ↓	78 z	76 ↑	80 ↑	88 ↑	77	88	73	·0015
125 ↑	131 ↓	67 ↑	74 ↑	64 ↓	69 ↑	25 ?	72 z	80 z	77 z	95	131	25	·0106
80 ↑	81 ↑	81 z	81 ↑	82 z	83 z	72 z	73 ↑	76 ↑	81 ↑	78	83	72	·0011
81 ↓	81 z	81 z	78 z	81 z	83 ↓	75 z	80 z	70 ↑	102 ?	80	102	69	·0033
76 ↓	79 ↑	77 z	66 ↓	73 ↓	75 ↓	28 ?	78 ↑	84 z	101 z	74	101	28	·0073
80 z	80 ↓	79 z	79 ↑	79 z	80 z	79 z	78 z	79 z	80 z	88	105	78	·0027
79 z	81 z	81 z	81 z	81 z	81 z	81 z	80 z	80 z	79 z	78	81	76	·0005
82 z	83 ↑	80 z	81 z	81 ↑	79 z	81 ↓	79 z	79 z	78 ↓	79	83	78	·0005
79 ↓	78 z	77 ↓	78 ↓	78 ↑	77 z	75 ↑	76 ↑	86 ↓	66 ↓	76	86	66	·0020
83 ↓	81 ↑	81 z	81 z	77 ↓	78 ↓	76 z	61 ↓	74 ↑	78 z	81	95	61	·0034
81 ↓	81 ↓	79 ↑	78 ↓	71 ↑	78 ↓	78 z	81 ↓	61 ↓	76 z	78	87	61	·0026
80 z	78 z	79 ↓	78 ↓	77 ↑	75 z	72 ↓	73 ↓	77 z	83 ↓	78	84	72	·0012
79 z	80 z	80 z	81 z	81 z	82 z	84 z	84 z	81 z	81 z	79	84	74	·0010
77 ↓	77 z	75 ↓	70 ↓	66 ↓	59 ↓	65 ?	71 ↑	85 ↑	96 ↓	71	96	59	·0037
78 z	78 ↓	77 z	80 ↓	78 z	77 ↑	77 z	75 z	76 ↓	65 ↑	80	113	65	·0048
68 ↓	65 ↑	71 ↓	64 ↑	69 ↓	66 ↓	68 ↓	87 ↓	67 ↑	92 ↑	77	117	64	·0053
80 z	77 ↑	78 z	80 z	78 ↑	78 ↓	77 ↓	77 z	82 ↓	58 ↑	79	107	58	·0049
79 ↑	78 ↓	79 ↑	78 ↓	78 ↑	80 ↑	79 ↑	78 z	77 z	78 z	79	96	64	·0032
77 z	78 ↑	76 z	77 ↑	77 z	78 ↑	78 z	75 z	75 ↓	75 z	75	81	71	·0010
75 z	75 z	75 z	75 ↓	73 z	75 z	75 z	75 z	73 z	73 z	74	78	73	·0005
73 ↑	74 z	74 ↑	75 ↓	73 z	72 ↑	69 z	65 ↓	64 ↑	75 ↑	72	75	64	·0011
63 ↓	54 ↓	67 z	59 ↓	67 z	71 ↑	75 ↑	64 ?	80 ↓	68 ↑	74	91	54	·0037
72 z	75 z	73 z	71 z	72 ↑	66 ↓	69 ↑	87 ↑	70 ↑	79 ↓	74	94	65	·0029
69 ↑	68 ↓	69 ↓	67 ↓	68 z	68 z	64 ↑	60 ↓	86 ↓	95 ↓	72	95	60	·0035
68 ↓	68 ↓	72 ↑	66 ↓	63 ↓	62 z	78 z	84 z	54 ↓	66 ?	72	96	54	·0042
82 z	68 z	68 z	68 z	67 ↓	64 z	61 ↑	62 z	37 ↓	72 ↓	66	82	37	·0045
75 ↓	69 ↓	69 ↓	58 ↑	70 ↑	57 ↑	74 ↑	84 ↓	67 ↑	74 ↓	69	84	57	·0027
78 ↑	71 ↑	57 ↓	73 ↓	77 z	70 ↑	38 ↓	53 ↑	68 ↓	75 ↓	74	93	38	·0055
77 ↓	78 ↓	74 ↑	75 ↓	75 ↓	74 ↓	72 z	51 ↑	66 z	70 ↑	75	100	51	·0049
78 z	78 ↑	79 z	78 ↑	78 ↑	76 ↓	79 ↑	78 ↓	78 ↓	77 ↑	76	85	67	·0018
81 z	81 z	81 ↓	81 ↓	81 ↓	80 ↑	81 ↓	78 ↓	73 ?	72 ↓	78	82	72	·0010
785	775	753	745	747	739	704	740	737	784	·61773	·6231	·6125	·0106

November 1882. 0·6100+ (C. G. S. Units). Φ = + 62° 38′ 52″.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	79	83	90	83	84	95	88	81	79	81	82	81	84	85
2	85	87	93	99	88	85	84	87	87	87	88	89	90	91
3	88	86	91	89	102	96	93	90	90	91	91	91	91	57
4	58	58	57	58	62	64	64	60	61	60	55	56	56	55
5	37	*	—	—	—	—	—	—	—	—	—	58	58	61
6	63	63	60	62	63	64	63	64	62	60	61	62	61	62
7	63	87	70	69	65	64	63	72	60	53	52	63	67	65
8	75	83	72	66	72	64	65	65	62	64	63	64	66	68
9	66	67	73	90	88	84	80	72	65	67	72	72	73	75
10	69	69	69	71	71	71	71	69	69	69	70	70	70	71
11	72	70	73	73	72	72	73	72	77	74	77	77	77	78
12	88	110	102	102	101	108	93	98	112	107	91	89	87	84
13	>139 ?	132 ?	123	129	139	>141 ?	78	122	125 ?	125	102	105	99	86
14	106	100	111	110	101	92	120	121	107 ?	89	82	84	88	90
15	99	64	70	73	65	56	49	40	41	43	43	46	48	52
16	38	49	63	67	56	49	50	49	50	50	50	50	45	47
17	64	62	27	95	110	111	103	119 ?	58	104	43	34	39	40
18	121	75	66	78	82	73	96	55	65	70	62	61	65	56
19	67	69	73	72	84	68	100	80	76	62	62	64	66	61
20	>126 ?	100	105	>126 ?	>125 ?	120	124	113	96	105	82	68	61	66
21	69	73	73	77	83 ?	78	75	113	>112 ?	102	86	80	71	58
22	78	84	84	82	78	78	77	79	77	77	79	79	80	82
23	82	93	100	85	98	92	73	76	77	73	77	80	80	80
24	86	88	78	77	81	80	73	71	71	73	72	73	76	78
25	72	87	82	90	85	88	104	81	68	98	96	67	75	115
26	79	73	74	73	81	77	85	82	71	69	67	66	73	70
27	45	67	89	76	68	68	69	67	65	77	81	80	82	80
28	88	82	86	88	83	80	78	81	80	80	82	82	82	83
29	82	84	82	82	80	80	80	81	81	80	80	79	78	78
30	86	76	71	78	84	79	73	74	77 ?	78	82	82	82	84
Mean -	·61757	800	796	838	845	820	808	805	766	782	734	717	723	719

December 1882. Φ = + 62° 38′ 52″.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	80	78	78	87 ?	84	93	95	82	82	82	83	84 ?	84	85
2	88	88	90	90	94	94	90	95	93	95	>97 ?	>96 ?	>96 ?	>96 ?
3	89	89	88	89	88	88	93	92	95	>95 ?	>95 ?	>95 ?	>95 ?	>95 ?
4	66	84	73	88	86	100	79	61	108	62	72	72	80	72
5	62	76	76	84	77	72	73	74	75	73	75	75	74	73
6	84	79	72	72	72	73	73	74	75	74	72	70	68	72
7	71	70	71	71	71	71	67	69	67	65	66	69	68 ?	65
8	69	69	68	68	70	67	66	70	69	69	69	69	69	69
9	65	65	67	68	69	67	66	66	68	61	59	63	63	67
10	64	67	69	73	72	68	69	68	69	70	71	74	71	71
11	86	108	79	88	72	69	69	67	68	70	69	69	72	77
12	69	72	95	92	73	71	71	69	64	62	67	70	71	72
13	62	68	72	76	74	71	68	70	71	69	70	71	70	71
14	71	72	74	72	76	71	69	71	71	71	70	70	69	76
15	75	72	75	75	75	72	74	72	73	73	71	70	75	73
16	50	55	109	98	96	86	81	83	72	70	71	85	77	72
17	73	73	71	74	73	82	71	70	72	72	72	72	72	73
18	70	72	73	73	73	73	73	73	73	73	73	72	71	71
19	81	91	81	78	72	72	74	73	74	73	74	73	73	73
20	85	81	85	90	96	120	91	73	103	82	79	69	73	69
21	72	105	98	97	91	99	96	77	77	77	82	70	81	77
22	71	75	102	102	109	73	80	76	75	73	75	78	77	79
23	71	80	74	108	81	76	74	73	75	75	79	78	81	77
24	50	115	81	81	78	89	90	69	62	71	77	73	75	76
25	89	76	83	100	85	78	76	77	72	75	77	77	79	79
26	72	72	77	72	77	77	69	68	70	73	72	77	76	78
27	71	78	78	75	77	76	76	75	76	76	75	75	74	75
28	73	71	79	82	90	75	74	75	75	76	75	75	75	73
29	61	84	82	87	94 ?	88	83	73	62	65	68	77	78	75
30	71	73	81	80	89	91	81	75	70	67	67	73	74	77
31	65	73	75	96	99	80	75	72	73	72	72	71	62	61
Mean -	·61718	784	795	834	817	801	777	736	751	729	740	746	749	748

* Needle displaced accidentally.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Local Mean Time (Balance Magnetometer). *November* 1882.

3	4	5	6	7	8	9	10	11	12	Daily Means.	Highest Reading.	Lowest Reading.	Difference.
85	86	85	85	85	85	83	83	81	83	84	95	79	·0016
90	89	89	89	89	80	81	83	86	88	87	99	80	·0019
55	55	56	55	55	55	55	55	54	56	74	102	54	·0048
53	50	48	44	44	43	41	40	40	37	51	64	37	·0027
58	61	66	61	62	50	59	62	61	64	58	66	37	·0029
64	64	63	64	63	63	61	62	55	44	61	64	44	·0020
66	66	64	65	66	67	65	35	58	47	63	87	35	·0052
68	67	68	67	63	66	67	66	58	68	67	83	58	·0025
69	67	68	68	69	69	68	68	69	71	72	90	65	·0025
72	72	72	72	73	72	72	72	73	73	70	73	69	·0004
80	78	80	80	70	72	71	74	115	90	77	115	70	·0004
71	74	75	78	67	73	98	103	97	55	90	112	55	·0057
79	88	94	89	89	89	89	86	104	105 ?	106	141	78	·0063
98	102	102	86	62	62	69	89	78	97	93	121	62	·0059
50	53	55	54	48	53	50	48	45	50	54	99	40	·0059
48	43 ?	43	47	51	44	47	48	49	56	49	67	38	·0029
21 ?	53	50	55	62	69	74	83	84	58	67	119	21	·0098
55	47	48	54	48	59	72	90	54	69	67	121	47	·0074
66	68	58	59	72	56	73	78	83	90	71	100	56	·0044
55	61	68	64	62	66	64	62	73	73	83	126	55	·0071
55	71	76	78	77	79	78	82	79	80	78	113	55	·0058
81	82	82	82	80	80	75	78	62	77	78	84	62	·0022
79	79	80	78	80	78	73	54	62	67	79	100	54	·0046
77	79	68	68	71	74	64	62	57	65	73	88	57	·0031
77	50	52	68	65	56	54	63	86	80	77	115	50	·0065
71	69	72	70	71	43	67	69	67	47	70	85	43	·0042
83	82	82	84	84	83	80	78	62	72	75	89	45	·0044
83	84	85	85	83	83	74	79	78	85	82	88	74	·0014
80	80	81	81	81	80	80	76	81	68	79	84	68	·0016
72	71	70	71	69	72	76	75	73	78	76	86	69	·0017
687	697	700	700	687	674	693	701	708	698	·61741	·6241	·6121	·0120

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. *December* 1882.

3	4	5	6	7	8	9	10	11	12	Daily Means.	Highest Reading.	Lowest Reading.	Difference.
83	77	79	85	88	86	88	85	87	90	84	95	77	·0018
>96 ?	>96 ?	>96 ?	96 ?	>96 ?	>96 ?	>96 ?	92 ?	>94 ?	>103 ?	94	103	88	·0015
>95 ?	>95 ?	>95 ?	95 ?	>82 ?	>80 ?	>80 ?	>77 ?	71	88	89	95	71	·0024
75	77	73	71	73	74	75	74	72	76	76	108	61	·0047
73	73	75	74	76	76	73	71	57	53	72	84	53	·0031
75	73	71	72	67	69	71	70	71	71	72	84	67	·0017
71	72	71	72	71	71	71	69	69	69	69	72	65	·0007
67	67	67	67	69	69	64	66	65	57	67	70	57	·0013
67	68	68	69	67	69	67	65	64	53	65	69	53	·0016
71	70	72	66	69	68	68	68	54	61	68	74	54	·0020
74	70	66	72	72	69	69	70	67	67	73	108	66	·0042
73	72	73 ?	73 ?	71	72	70	69	71	61	71	95	61	·0034
69	72	70	69	71	70	71	71	70	65	70	76	62	·0014
78	76	72	77 ?	77 ?	76	73 ?	73	73	73	73	78	69	·0009
72	75	80	47	34	18	45	50	62	66	65	80	18	·0062
73	76	74	73	72	73	74	75	75	75	75	76	109	50	·0059
73	73	73	73	75	73	65	71	71	73	72	82	65	·0017
74	68	71	72	62	66	64	80	72	72	71	80	62	·0018
75	72	75	75	76	77	69	72	72	91	75	91	69	·0022
53	63	62	66	26	55	78	55	86	65	75	120	26	·0094
75	75	75	72	75	71	47	61	68	66	78	105	47	·0058
82	78	78	75	76	71	68	75	72	69	78	109	68	·0041
78	79	80	78	77	77	76	73	74	48	76	108	48	·0060
77	77	77	76	78	73	72	74	74	91	77	115	50	·0065
79	77	78	77	78	78	77	77	77	76	79	100	72	·0028
79	79	78	77	76	74	70	71	68	68	73	79	68	·0011
77	76	78	73	74	71	66	58	63	56	72	78	56	·0022
76	75	78	75	72	55	63	69	70	73	73	90	55	·0035
77	78	77	76	77	71	71	68	67	70	75	94	61	·0033
76	80	73	77	75	78	69	70	69	70	75	91	67	·0024
65	63	63	61	63	61	62	62	61	58	69	99	58	·0041
751	749	748	736	715	705	701	704	705	701	·61748	·6215	·6118	·0097

January 1883. 0·6100+ (C. G. S. Units). $\Phi = +62^\circ\ 38'\ 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	62	71	84	76	73	85	79	71	69	73	70	77	77	78
2	78	77	78	78	81	77	70	73	72	72	74	73	75	78
3	81	82	78	78	80	78	75	77	77	78	77	77	77	78
4	78	77	81	85	78	73	78	77	77	78	78	47	46	45
5	75	84	80	81	82	82	83	82	82	82	80	78	78	79
6	80	92	95	96	93	107	94	68	66	75	77	75	83	77
7	72	86	110	103	96	79	93	82	70	74	66	61	73	82
8	76	74	65	74	78	74	72	71	72	71	73	70	70	72
9	72	75	81	81	80	73	73	71	71	70	75	71	72	75
10	73	70	72	72	73	73	73	73	74	76	73	73	73	73
11	73	73	73	73	72	72	73	72	71	71	72	72	73	73
12	71	72	72	74	74	71	73	72	72	70	66	68	71	72
13	70	69	71	71	71	71	80	66	65	69	71	71	69	69
14	75	68	67	71	71	71	69	68	69	69	67	71	72	72
15	77	77	80	86	84	82	77	77	74	70	70	76	77	77
16	73	81	82	77	81	82	76	73	75	77	79	78	78	79
17	89	88	96	88	89	88	78	81	69	78	80	79	79	80
18	65	81	86	84	83	78	79	77	77	75	80	78	78	81
19	84	81	82	85	83	82	81	83	83	82	83	83	83	82
20	81	78	95	103	94	103	98	89	73	68	71	67	76	80
21	93	75	78	84	80	85	73	76	65	71	73	80	81	81
22	77	79	82	90	103	81	79	80	80	79	80	81	81	82
23	71	75	85	84	88	88	81	81	78	78	80	80	80	79
24	82	82	83	83	81	80	81	79	77	77	80	71	78	81
25	80	80	91	88	103	81	84	82	72	68	77	72	76	70
26	93	88	109	89	97	116	103	78	75	71	67	77	77	77
27	89	111	85	79	78	78	86	89	75	78	79	78	77	81
28	77	80	81	82	81	80	78	80	80	80	77	79	81	82
29	83	82	80	82	83	87	76	80	81	78	78	77	76	75
30	78	96	83	81	77	78	80	78	77	77	80	77	80	77
31	65	72	84	89	73	76	74	77	73	72	73	75	78	78
Mean -	·61772	799	829	828	826	816	796	769	739	744	750	739	756	763

February 1883. $\Phi = +62^\circ\ 38'\ 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	75	76	80	89	80	75	75	75	71	70	67	72	75	50
2	83	74	111	109	104	106	103	73	80	94	64	74	81	78
3	68	69	90	84	90	108	80	72	78	79	71	80	78	80
4	49	84	69	88	96	109	104	81	77	74	73	75	71	78
5	94	91	102	85	84	80	81	78	75	67	80	78	80	81
6	71	78	81	81	78	77	77	77	104	88	76	72	75	75
7	77	82	77	78	75	77	78	78	78	77	75	74	75	76
8	75	79	75	75	72	77	75	73	75	73	72	73	73	76
9	75	72	76	77	77	78	78	77	76	75	72	72	71	75
10	75	74	78	79	81	79	77	75	77	77	75	74	77	78
11	68	67	79	75	76	74	72	70	71	77	75	75	76	76
12	67	68	69	69	66	67	65	61	66	68	70	69	71	69
13	69	69	69	69	69	72	68	65	67	67	66	67	68	68
14	82	75	71	72	71	81	84	78	63	63	66	66	66	66
15	69	70	71	69	67	69	69	71	71	71	69	69	70	68
16	68	73	71	82	68	67	75	65	67	68	67	66	67	67
17	73	67	68	68	76	67	65	65	64	64	64	66	69	69
18	69	68	69	69	69	69	69	67	67	68	68	67	66	67
19	72	71	71	70	71	68	70	69	68	68	68	68	67	68
20	70	69	77	79	102	95	80	70	65	29	29	73	74	75
21	55	75	77	74	76	72	73	71	72	72	72	72	75	73
22	72	117	104	102	104	95	114	70	107	105	91	79	76	69
23	89	92	82	79	82	86	88	66	73	66	71	74	78	73
24	73	76	89	78	76	80	109	>150	52	78	70	69	71	49
25	109	120	102	107	80	83	82	77	80	80	80	78	77	71
26	75	76	78	81	93	80	78	74	75	69	69	72	77	79
27	72	80	85	82	77	78	101	88	90	101	83	91	71	77
28	89	97	86	95	109	120	109	117	97	79	71	73	77	74
Mean -	·61744	789	806	809	810	825	821	769	752	738	705	731	735	716

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Local Mean Time (Balance Magnetometer). *January* 1883.

3	4	5	6	7	8	9	10	11	12	Daily Means.	Highest Reading.	Lowest Reading.	Difference.
78	80	80	80	77	80	77	76	76	77	76	85	62	·0023
77	78	77	80	79	78	77	76	77	78	76	81	70	·0011
80	78	77	78	77	77	78	78	78	77	78	82	75	·0007
45	44	44	45	43	46	40	31	38	31	58	85	31	·0054
80	78	74	73	75	66	68	75	73	84	78	84	66	·0018
81	78	80	78	79	80	73	71	44	64	79	107	44	·0063
72	78	77	77	79	76	71	75	18	75	76	110	18	·0092
73	78	73	73	74	75	75	71	69	72	72	78	65	·0013
77	73	75	73	74	75	72	73	73	73	74	81	70	·0011
74	76	77	77	79	77	72	73	73	74	73	79	70	·0009
72	72	72	72	72	74	73	71	55	63	71	74	55	·0019
72	72	73	72	72	72	73	72	72	71	71	74	66	·0008
70	72	71	72	71	71	71	71	72	56	70	80	56	·0024
73	75	75	78	78	77	77	78	77	78	72	78	67	·0011
77	77	78	77	76	77	77	77	72	69	76	86	69	·0017
80	81	81	82	80	80	79	80	95	84	79	95	73	·0022
81	81	81	81	82	82	77	81	66	76	81	96	66	·0030
75	80	83	82	80	82	82	82	80	71	79	86	65	·0021
82	83	83	82	80	81	80	80	75	74	81	85	74	·0011
81	80	78	78	79	73	72	66	71	71	80	103	66	·0037
85	82	82	81	81	80	80	80	78	79	79	93	65	·0028
82	82	82	82	82	81	81	81	80	81	82	103	77	·0026
79	81	80	80	80	81	81	81	83	80	80	88	71	·0017
85	85	84	81	81	81	82	81	78	78	80	85	71	·0014
81	78	78	80	80	71	83	66	72	84	79	103	66	·0037
79	81	81	81	79	76	78	78	79	73	83	116	67	·0049
80	81	84	81	76	76	70	60	72	78	80	111	60	·0051
84	82	83	82	82	77	80	80	79	80	80	84	77	·0007
78	80	78	79	79	81	82	77	80	80	79	87	75	·0012
79	81	82	80	81	79	78	73	77	101	80	101	73	·0028
77	79	77	77	79	78	80	75	76	75	76	89	65	·0024
771	776	774	772	770	761	755	738	712	744	·61771	·6216	·6118	·0098

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. *February* 1883.

3	4	5	6	7	8	9	10	11	12	Daily Means.	Highest Reading.	Lowest Reading.	Difference.
77	64	77	53	46	49	70	69	77	72	70	89	46	·0043
72	78	55	75	78	80	79	78	38	58	80	111	38	·0073
79	81	78	79	77	69	80	72	73	<29 ?	76	108	29	·0079
83	80	79	82	76	73	71	71	63	76	78	109	49	·0060
83	85	83	80	81	82	72	75	78	81	81	102	67	·0035
78	79	80	80	78	78	75	71	74	77	78	104	71	·0033
77	76	78	77	77	79	79	77	74	76	77	82	74	·0008
78	79	80	79	80	79	78	78	75	67	75	80	67	·0013
76	77	78	81	79	77	71	52	73	72	74	81	52	·0029
78	76	77	76	77	77	75	75	75	62	76	81	62	·0019
77	77	73	77	76	77	77	68	68	68	73	79	67	·0012
69	68	68	69	70	69	68	68	67	68	67	71	61	·0010
68	68	69	69	70	69	67	68	68	81	68	81	65	·0016
67	67	66	67	64	65	66	66	66	66	69	84	63	·0021
69	66	69	70	69	61	65	69	67	74	68	74	61	·0013
68	68	68	68	68	69	69	67	67	69	63	82	65	·0017
69	69	69	70	69	70	71	70	68	69	68	76	64	·0012
68	68	67	68	69	67	58	61	63	73	67	73	58	·0015
68	69	69	69	71	71	70	70	69	70	69	72	67	·0005
73	73	75	73	73	75	75	74	73	66	71	102	29	·0073
67	56	73	69	80	70	68	58	66	71	70	80	55	·0025
55	51	55	48	62	71	65	61	78	114	81	117	48	·0069
73	80	76	76	78	73	67	69	65	72	76	92	65	·0027
85	82	59	52	74	59	68	92	86	96	78	150	49	·0101
79	80	80	80	71	66	69	66	66	61	81	120	61	·0059
80	80	78	79	77	81	77	71	72	81	77	93	69	·0024
81	56	67	67	67	66	72	72	83	97	79	101	56	·0045
74	69	73	71	58	61	61	84	81	75	83	120	58	·0062
740	722	721	716	720	708	708	704	705	729	·61745	·6250	·6129	·0121

March 1883. 0·6100+ (C. G. S. Units). $\phi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	45	81	89	101	113	120	111	110 ?	62	68	72	65	75	78
2	72	103	91	104	105	139	118	107	96	76	78	77	83	81
3	110	105	87	82	84	84	86	86	77	71	69	78	77	77
4	83	89	86	86	83	82	82	80	77	78	80	79	80	81
5	83	83	99	103	92	86	78	72	77	80	80	80	79	79
6	82	80	85	84	88	85	80	88	78	77	78 z	81	81	83
7	78	88	85 z	83	85	77	71	77	77	71	81	83	82	81
8	87	89	101	95	121	99	112	85	73	78	77	80	82	71
9	83	86	96	115	89	78	78	79	76	75	71	75	77	79 z
10	56	79	84	81	81	82	80	75	75	75	73	77	77	81
11	64	80 ?	81	83	93	88	73	75	73	79	80	81	80	77
12	82	80	81	81	81	78	98	80	77	78	78	79	78	82
13	96	92	105	127	120	114	82	82	81	79	79	80	76	77
14	98	83	82	101	129	83	82	79	74	75	77	78	77	77
15	76	81	82	78	77 ?	76 ?	77 z	76 ?	77 ?	77	78	77	78 ?	78 z
16	75	78	80 z	79	77	78	77	76	73	74	77	77	79	82
17	78	84	86	81	82	79 ?	81	78	78	80	77	75	77	78 z
18	78	77	80	82	84	81	77 z	77	76	74	74 z	73	72	73
19	73	73	82	81	78	77	77	78	78	76	75	74	72	73
20	75	75 z	75	76	75	74	75	76	76	75	74	74 z	75	75
21	86	85	86	84	84	86	83	75	66	71	68	69	76	74
22	101	95	109	87	117	108	97	84	70	77	76	78	82	83
23	72 z	82	81	85	90	111	77	74	71	72	74	76	78	78
24	77	77	75	76	77	75	75 z	74	75	75 z	73 z	72 z	71	72
25	73	76	77	78 z	78	77	78	73	73	73	72	74	73	74
26	58	79	88	84	89	95	77	74	72	72	71	71	86	61
27	115	93	100	98	103	132	119	113	111	90	64	69	74	<55 ?
28	86	79	89	100	102	90	103	102	78	76	68	81	74	78
29	87	88	98	108	98	108	99	110	82	71	74	77	78	80
30	83	85	89	91 z	85	78	77	79	77 ?	78	78	79	78 z	80
31	79	88	85	84	86	81 z	78 ?	75	75	76	79	77	78 ?	81
Mean -	·61804	843	875	896	918	904	857	829	768	757	750	763	776	767

April 1883. $\Phi = +62° 38' 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	72	81	82	84	92	84	79 z	76 z	82	83 ?	81	81 ?	82 ?	83 z
2	105	88	84	85	90	94	81	82 z	82	78	81	82	83	84
3	84	95	102	127	155	105	110	125	117	94	91	87	84	73
4	113	98	91	92	93	98	117	100	84 ?	83	70	78	82	82
5	84	87	94	88	88	98	98	85	83	86	83	84	84	83
6	88	102	89	86 z	83	87	86	82	82	82	82	82	83	80
7	84 z	82	84	83	83	84	84	84	83	82	82	82	82	82
8	86	84	90	93 ?	98	95	95	82	71	77	81	83	82	84
9	78	86	98	88	94	105	83	81	81	82	84	83	83	85
10	84	83 z	84	85	90	84	84	83	84	83	83	83	85	86
11	81	95	100 ?	92	88	85	83	82	82	82	83	83 z	84 z	84
12	89	90	86 z	95	90 z	91	82	82	82	83	82	83	84	83
13	93	84	91	88	88	86	84	82	82	83	81	84	82	84
14	84	84	84 z	80	83	83	84	83	82	83	83	82	82	81
15	83	79	80	83 z	82 z	82	88	88	78	81 ?	81 z	82	81 ?	80
16	82 z	83	93	94	85	88	82	83	82	81	81 z	82	80	80 ?
17	83	83	83	86	89 z	83	81	81	82	82	80	82	81	80
18	91	91	93	89	93	104	95	80	77	77	80	81	84	84
19	129	105	93	98	89	95	98	112	69	77	77	77	73	69
20	117	95	91	96 ?	105	105	103	98	113	103	86	81	80	80
21	80	81 z	84	84 z	81	77	80	80	80	80	80	78	78	79 z
22	78 z	82	80	83	83	78	77	75	74	78	77	77	77 ?	78
23	77	77	80 ?	80	81	81	77	75	78	78 z	76	77	77	78
24	77	76	76 z	79	78	83	85	90	72	82	72	75	<59 ?	<52 ?
25	90	97	109	100	88	96	85	81	82	78 ?	78	75	78	77
26	102	88	78	84	86	84	81	77	81	67	73	78	82	78
27	76	79	95	95	91 z	91	78	80	77	77	78	79	79	82
28	64	71	75	83	83	80	76	77	78 ?	78	80	80	78	77 z
29	79	77	74	77 z	80	86	76	66	73	73	74 z	75	75	75
30	69	71	78 z	80	87	78	70	66	65	68	71	72	75	75
Mean -	·61867	858	874	886	899	890	861	839	813	807	797	803	799	793

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Local Mean Time (Balance Magnetometer). *March* 1883.

3	4	5	6	7	8	9	10	11	12	Daily Means.	Highest Reading.	Lowest Reading.	Difference.
74	75	79	77	68	63	67	85	83	84	81	120	45	·0075
77	83	80	78	62	69	76	67	72	65	85	139	62	·0077
80	82	77	79	83	81	69	54	68	77	80	110	54	·0056
80	82	81	84	71	69	67	73	83	83	79	89	67	·0022
80	80	81	80	81	81	78	74	77	78	81	103	72	·0031
82	78	83	82	83	78	75	78	69	93	81	93	69	·0024
84	85	84	83	78	73	68	76	82	86	79	88	68	·0020
77	81	78	<54 ?	64	62	<54	63	72	82	80	121	54	·0067
80	81 z	81	79	78	77	78	78	76	79	81	115	71	·0044
78	81	82	81	80	81	80	80	79	83	78	84	56	·0028
80	79	79	79 z	80 z	80	80	80 z	81	80	79	93	64	·0029
78	78	78	77 z	77	79	76	<53	102	89	80	102	53	·0049
77	80	79	80	79 z	79	78	77	74	89	86	127	74	·0053
78	78 ?	78 ?	77 z	78 z	75	71 ?	73	74 ?	90	82	129	71	·0058
79	80	78	78 z	80	78	80	77	87	71	78	87	71	·0016
83	80	81	81	80	80	79 z	79	77 z	66	77	83	66	·0017
77	76	79	77	78 z	77 z	76 z	76 z	78	77	78	86	75	·0011
76	75	77	74	73	75	77	77	74 z	75	76	84	72	·0012
77	76	75	75	75	75	75	75	75 z	75	75	82	72	·0010
77	76 z	76	75	76 z	77	71	76	89	88	76	89	71	·0018
63	<63 ?	63	<61	61	<61 ?	64	67	78	93	73	93	61	·0032
80	81	81	74	74	76	74	71	90	80 ?	85	117	70	·0047
78	76	79	75	78	71	55	66	84	82	77	111	55	·0056
75	77	78 z	77	74	73	72	51	67	71	73	78	51	·0027
77	75	77	78	75	71	67	68	72	87	74	87	67	·0020
55	<55 ?	56	48	61	43	53	67	68	85	69	95	43	·0052
69	67	74 z	72	69	67	71	97	92	93	88	132	55	·0077
81	75	77	<64	<63 ?	<63 ?	<62 ?	73	68	69	79	103	62	·0041
80	81	73	69	72 z	67	77	80	82	75	83	110	67	·0043
82	80 z	81	79	80	72	74	81	80 z	80	80	91	72	·0019
80	77	79	80	75	80 z	78	74 z	64	83	78	88	64	·0024
77²	77²	775	75¹	744	727	717	731	780	809	·61795	·6239	·6143	·0096

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. *April* 1883.

3	4	5	6	7	8	9	10	11	12	Daily Means.	Highest Reading.	Lowest Reading.	Difference.
83 z	83	83	84	82	85	82	75	73	89	81	92	72	·0020
86	85	85	84	84	85	84	82	81	111	86	111	78	·0033
64	68	67	60	73	68	66	75	72	88	89	155	60	·0095
83	81	82	83	83	85	80 z	79	83	78	87	117	70	·0047
82	83	82	83	79	77	69	77	72	97	84	98	69	·0029
81	83	84	83	84	84	84	84 z	84	79	84	102	79	·0023
82	82	83	82	84	81 z	77	73	80	81	81	84	73	·0011
84	86	84	84	85	84	85	83	81	84	85	98	71	·0027
84	87	84	85	83 z	82	84	82	84 z	84	85	105	78	·0027
86	86 z	87	85	83	86 z	85	82	71	77	83	90	71	·0019
84	84	84	85	84	83	83	80	<71	72	83	100	71	·0029
84	83	83	83	82 ?	83	83 z	82 z	82	85	84	95	82	·0013
84	85	85	84	84	83	81	83	82	83	84	93	81	·0012
80	80 ?	83	83	82 z	84	81 z	82 z	83 z	82 ?	82	84	80	0004
82 z	82	83	83	83	86	80	80	81 z	82	82	88	78	·0010
81	81	81 ?	82	80	82 z	78	75	73	78	82	94	73	·0021
80	80	80	81	81	81	82	82	80	81	81	89	80	·0009
82	82	75	69	67	67	74	<59 ?	82	82	81	104	59	·0045
57	60	59	59	<52	66	76	66	62	73	78	129	52	·0077
83	82	83 ?	83	81	79	75	69	70	79	89	117	69	·0048
80	80	79	78	78 ?	78	77	77	77	78 z	79	84	77	·0007
77	78	79	80	79	79	78	78	77	80	78	83	74	·0009
77	79	78	77	76	78	78	78	78	77	77	81	75	·0006
<52 ?	<54 ?	<56 ?	<60 ?	<52 ?	<52 ?	64	72	76	86	70	90	52	·0038
80	75	78	74	67	70	<55 ?	64	68	89	80	109	55	·0054
72	74 z	68	73	70	62	67	82	<54 ?	73	76	102	54	·0048
81	81	80	79	80	76	73	72	68	80	80	95	68	·0027
78	80	81	78	80	79	78	77	73	67	77	83	64	·0019
76	75	75	75	73	75	71	70	68	74	74	86	66	·0020
82	78 z	77 ?	77 z	75	73	69	64	78	88	74	88	64	·0024
789	792	789	785	775	778	766	761	755	819	·61816	·6229	·6152	·0077

May 1883. 0·6100+ (C. G. S. Units). $\Phi = +62^\circ\ 38'\ 52'.$

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	77	83	81	85	75	74	74	73	73	69	70	71	73	75
2	86	85	80	80	101	110	84	73	78	74	76	79	80	81
3	81	94	95	93	90	80	80	80	79	80	77	78	78	78
4	80	82	85	87	81	80	80	80	82	82	81	79	80	82
5	77	78	76	77	83	83	81	77	73	73	73	74	73	76
6	80	85	81	82	86	96	89	76	78	76	88	77	77	82
7	83	82	89	85	88	82	81	79	75	72	76	76	76	80
8	77	84	88	85	88	83	79	77	73	74	75	75	75	78
9	78	77	79	82	77	79	80	80	79	79	78	77	78	79
10	77	78	79	80	79	78	77	77	76	76	74	75	77	77
11	92	90	89	89	91	77	75	76	77	77	77	77	77	77
12	75	80	79	78	78	77	77	78	76	77	77	76	77	77
13	88	81	82	82	85	86	82	75	70	75	75	73	75	76
14	81	89	90	84	84	88	80	77	77	77	77	76	75	76
15	91	85	80	85	80	78	75	72	73	76	80	77	78	78
16	76	81	83	97	93	97	98	104	77	73	75	75	75	75
17	75	105	91	81	80	78	75	75	74	75	77	78	78	76
18	76	74	77	90	81	81	78	76	76	77	77	77	77	79
19	74	77	82	103	100	95	89	80	70	71	75	76	78	77
20	75	76	81	80	80	75	77	76	75	73	78	77	78	74
21	77	84	98	108	100	100	85	84	78	78	81	73	68	<66
22	89	88	85	95	99	93	86	73	76	78	75	76	81	82
23	<64	82	81	91	89	87	80	82	72	74	75	77	77	77
24	87	84	84	82	85	82	73	72	<70	75	75	76	81	79
25	83	81	83	85	84	81	82	75	78	78	79	79	79	80
26	91	87	93	98	107	81	77	71	71	73	74	77	75	79
27	98	91	85	85	96	79	78	79	76	76	75	75	75	73
28	84	79	75	83	84	75	74	82	83	77	77	77	77	80
29	105	90	80	80	82	89	80	76	77	76	75	76	76	77
30	72	78	88	88	85	88	82	74	69	73	77	77	79	81
31	82	83	86	90	82	78	76	73	77	77	77	77	77	77
Mean -	·61816	836	840	868	869	865	801	775	754	755	767	762	770	776

June 1883. $\Phi = +62^\circ\ 38'\ 52''.$

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	80	79	84	92	81	80	77	71	71	72	72	75	78	81
2	85	103	95	95	101	129	>142	>142	131	128	85	77	78	80
3	105	103	93	90	88	81	80	93	82	78	76	77	77	81
4	88	86	85	86	91	84	80	78	78	77	77	77	77	76
5	78	84	84	81	79	78	77	78	77	78	76	75	75	76
6	81	133	107	108	90	90	98	65	62	67	72	80	80	76
7	81	80	80	80	79	77	74	75	75	77	77	80	78	80
8	76	80	85	89	92	90	96	77	70	73	75	78	82	83
9	74	80	89	88	91	104	85	77	69	69	72	72	79	78
10	80	84	83	81	80	78	73	74	76	77	75	77	77	81
11	72	84	84	80	82	86	78	78	78	78	75	76	76	75
12	81	80	80	80	91	93	80	77	77	77	78	78	79	79
13	81	81	82	81	80	80	81	81	81	77	77	77	78	78
14	91	78	81	85	85	79	78	75	73	75	77	78	79	78
15	78	79	80	80	79	80	78	79	78	78	77	78	77	78
16	80	78	79	82	79	80	80	79	78	77	76	73	75	77
17	81	89	77	95	86	81	102	92	66	73	75	78	81	80
18	98	77	105	95	95	89	92	83	76	75	81	83	81	78
19	73	77	113	94	86	94	81	78	71	77	81	78	80	82
20	75	76	91	80	88	80	78	75	72	75	78	78	80	82
21	77	80	82	84	82	80	81	80	78	78	77	77	77	80
22	78	80	83	81	94	82	76	70	66	69	72	73	77	76
23	83	101	110	110	116	105	89	79	77	75	77	78	75	75
24	71	79	77	81	82	80	77	76	75	77	77	78	78	79
25	77	77	78	82	82	84	90	81	81	73	77	71	72	75
26	90	97	83	91	85	78	73	89	67	71	71	71	75	74
27	81	98	132	131	>140	100	84	78	84	78	77	82	89	80
28	76	74	82	95	89	82	76	79	73	73	76	75	74	75
29	82	78	83	73	76	75	74	71	73	77	78	78	79	81
30	95	101	112	108	>132	>132	>132	94	92	81	75	72	72	75
Mean -	·61816	859	893	893	900	877	854	808	769	770	763	767	778	783

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Local Mean Time (Balance Magnetometer). *May* 1883.

3	4	5	6	7	8	9	10	11	12	Daily Means.	Highest Reading.	Lowest Reading.	Difference.
74	68	65	<55 ?	62	66	72 ?	75	75	86	73	86	55	·0031
81	80	77	78	78	82	75	78	75	64	80	110	64	·0046
78	81	81	81	78	73	73	76	78	79	8•	95	73	·0022
83	84	82	82	81 ?	82	74	75	74	75	80	87	74	·0013
77 ?	78	77	77	75	77	78	<66 ?	72	73	76	83	66	·0017
79	80	81	79	80	73	73	72	89	88	81	96	72	·0024
78	79	78	78	79	80	78	76	76	76	79	89	72	·0017
79	81	77	77	78	80 ?	78	74	77	<56	78	88	56	·0032
81	80	80	78	80	79	76	76	74	77	78	82	74	·0008
79	80	79	82	80	78	78	77	77	67	77	82	67	·0015
78	78	81	81 z	80	68	72	71	71	73	79	92	68	·0024
77	77	78	80 z	78	78	77	77	75	71	77	80	71	·0009
78	79 z	81	75	75	84	<67 ?	64	69	75	77	88	64	·0024
77	77 ?	78 z	78 z	77 ?	79	72	72	77	83	79	90	72	·0018
78 ?	78 z	79	80	79	78	77	74	73	71	78	91	71	·0020
76	76	77	76	77	77 ?	78	78	76	76	81	104	73	·0031
79	89	<71 ?	75	78	73	69	76	77	75	78	105	69	·0036
81 z	80	80	78	77	78	75	<62 ?	72	75	78	90	62	·0028
75	78	78	78	78 z	77	78 z	72	73	74	79	103	70	·0033
79	71	<68 ?	<68 ?	<69 ?	<68 ?	<68 ?	84	96	101	77	101	68	·0033
69	<66 ?	<64 ?	<63 ?	<62 ?	<62 ?	<62	<62 ?	78	78	76	108	62	·0046
79	75	72	72	75	62	64 z	73	110	95	81	110	62	·0048
78	78	78	78	77	76	<75 ?	76	75	76	78	91	64	·0027
78	81	75	<71 ?	<71 ?	<71 ?	<71 ?	<71 ?	83	<71 ?	77	87	70	·0017
83	77	75	78 z	78	<73	73 ?	68 z	72	<76	78	85	68	·0017
76	71 ?	77	77	73	75	71	59	72	72	78	107	59	·0048
69	73	65	72	80	71	67	72	77	80	77	98	65	·0033
79	81	78	76	71	75	72	67	93	85	78	93	67	·0026
77	79	77 z	77	78	75	77	77	77	77	79	105	75	·0030
81	82	81	81	80	80	73	65	72	77	78	88	65	·0023
78	78	81	81	78	77	71	71	73	76	78	90	71	·0019
779	779	765	762	762	751	730	721	777	767	·61785	·6210	·6155	·0055

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. *June* 1883.

3	4	5	6	7	8	9	10	11	12	Daily Means.	Highest Reading.	Lowest Reading.	Difference.
83	82 z	80	71	69	72	73	82	68	74	77	92	68	·0024
88	79	77 z	80	73	76	78	78	81	86	94	142	73	·0069
81	81	80	78	80	79	77	75	64	83	82	105	64	·0041
77	79	80	80	78	79	78	78	78	75	80	91	75	·0016
77	77 z	78	77	77	75	73	72	75	81	77	84	72	·0012
77	80	68	78	76	63	72	72	71	86	81	133	62	·0071
80	81	81	79 z	81	78	77	74	73 ?	77	78	81	73	·0008
82	82	82	81	81	81	76	69	76	80	80	96	69	·0027
80	82	81	80	80 z	78	80	80	79 z	80	80	104	69	·0035
79	82 z	80 z	80	77	73	72	73	72	71	77	84	71	·0013
75	78	78	78 z	79	78	78	77 z	77	77	78	86	72	·0014
78	77	77	76	77	79	79	80 z	61	80	78	93	61	·0032
78	81 z	84	78	77	77	73	75	73	79	78	84	68	·0016
77	78 ?	79 z	79	78	79	78 ?	78 z	78	68	78	91	73	·0018
79	79 ?	81 z	82	80	78	78 z	78 ?	79	78	78	82	77	·0005
79	81	81	80 z	62	66	63	66	75	81	76	82	62	·0020
81	37	68	72	39	68	76	73	75	51	74	102	37	·0065
73	81	75	78	70	54	66	80	65	72	80	105	54	·0051
80	77	78	76	80	78	64	55	77	91	80	113	55	·0058
82	77	75	67	79	78	74	91	77	80	78	91	67	·0024
82	82	81	79	78 z	79	79	79 z	79	78	79	84	77	·0007
83	84	56	69	53	56	65	73	118	99	76	118	53	·0065
74 ?	75	77	65	71	80	72	63	72	70	82	116	63	·0053
79	80	83	78 ?	78	80	78	78	78	78	78	83	71	·0012
73	74	73	73	73	73	75	75	73 ?	77	76	90	71	·0019
77	76	75	76	76	75	73	65	58	77	76	97	58	·0039
75	76 ?	65	63	62	63	70	65	70	73	84	140	62	·0078
77	78	78	76 z	76	79	75	77	76	73	77	95	73	·0022
84	82	80	80	81	83	83	75	71	100	79	100	71	·0029
59	29	42	42	50	64	71	64	72	87	81	132	29	·0103
783	762	758	750	730	740	742	734	753	787	·61795	·6242	·6129	·0113

July 1883. 0·6100+ (C. G. S. Units). $\Phi = +62^\circ\ 38'\ 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	98	85	93	105 ?	105	110	111	97	70	69	72	77	81	81
2	75	78	80	88	77	78 z	80	80	77	75 ?	76	74	74	76
3	77	76	81	82	75	73	79	71	67	66	72	75	76	86
4	68	71	77	87	93	91	80	75 z	75 z	77	78	79	80 z	80
5	114	85	80	85	102	97	83	81	77	75	76	79	81	81
6	73	84	83	87	84	80	79	75	77	75	74 z	75	74	75
7	76	77	75 ?	79	78	77	76 ?	75	72	72	74	79	78	77 z
8	101	82	88	86	85	118	105	89	66	73	73	80	75	78
9	78	77	78	82	78	79	78	79	76	76	75	76	76	77
10	93	117	106	84	80	82	78	77	77	77	77	78	80	85
11	80	87	82 z	82	80	80	81	78	78	77	76	77	76	82
12	78	85	81	85	86	87	81	81	77	80	79	79	78	80
13	91	92	88	97	97	103	97	80	68	67 z	75	76 z	78 z	79
14	82	83	108	105	73	108	>135 ?	84	64	74	72	73	73	73
15	80	78 z	78	78 z	78 z	77 ?	78 z	82	87	67	69	72	73	75
16	81	89	99	95	82	79	80	80	72	67	71	76	77	75
17	82	80	84 z	88	85	80 z	75	72	74	75	74	74	76	76
18	85	76	90	90	91	90	78	71	77	73	78	66	75	74
19	85	86	84	84	87	80	78	78	75 z	74	77	75	77	73
20	75	82	77 z	77	81	78	73	70	71	72	71	73	73	74
21	78 z	74	74	74	75	76	76	76	74	73	73	73	75	75
22	77	77	77	78	78	77	77	77 z	77 z	75 z	76 z	75	75 z	77
23	75	79	77 z	77	78	78	77	77	77	75	74	75	75	73 ?
24	82	84	89	92	77	88	99	94	69	65	70	75	75	82 ?
25	70 ?	74	97	97	98	85	83	78	75	76	76 z	78	79	78
26	73	75	81	88	88	83	75	66	68	69	76	84 ?	82	84
27	87	84	84	85	92	92	89	78	73	77	77	77	77	78 ?
28	77	76 ?	77 ?	79	78	80	78	76	77	76	78 z	76	77 z	77 z
29	80	78	77	77	79 z	78	77 ?	77	76	75	75	76	75	76
30	85	81	84	127	131	116	109	103	100	138	115	100	96	82
31	73	85	82	96	93	111	126	149	124	120	80 ?	78	73	80
Mean -	·61816	818	842	876	859	875	862	815	764	768	761	768	771	780

August 1883. $\Phi = +62^\circ\ 38'\ 52''$.

Days.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2
1	90	89	101	93	90	113	100	114	93	79	75	82	81	89
2	88	90	88	87	84	86	96	78	80	80	80	81	82	81
3	85	83	92	86	84	82	81 z	80	81 ?	81 z	80	80	81	81 z
4	83	82	82	83	85	80 z	80	80	80	80	79	79	80	80
5	80	84	78	84	81	86	98	89	81	82	77	78	78	81
6	82	98	98	110	108	97	101	88	60	67	73	78	80	65
7	83	93	85	85	86	91	98	84	75	76	76	78 ?	81	83
8	85	81	81	84	84	93	94	83	79	73	78	78	78	78
9	83	80	80	80	80	79	78 z	77 z	77 z	77	77	76	77	77 z
10	77	77	77 z	77	77	77	75	75	74	73	74	75	75	77
11	81	82	86	91	88	86	80	67	70	73	76	75	75	76
12	72	72	71 ?	74	77	76	75	75	70	66	69	72	75	77
13	73 z	77	75	80	76	75	73	70	72	71	72	73	75	81 ?
14	85	85	80	82	77	73	74	73	73	73	75	75	75	73
15	74 z	73	73	77	77	77	74	74 z	73 z	74 z	75 z	75 z	74 z	75
16	73	75	75	75 z	75	76 z	75	71	72 ?	75	73	74	75	75
17	73 z	73	74	75	75	75	73	73	74	74	73	74	74	76
18	78	79	88	102	107	124	132 z	109 z	98	78	78	78	81 z	75
19	75	76	77	77	80 z	76	75	76	75	74	75	75	74	73
20	84	83	84	80	79	76	76	75	75	75	77	76	77	76 ?
21	68	84	81	80	77	82	77	71	75	74 z	75	75 ?	77	76
22	75	65	86	88	91	82	75	74	74	68	73	75	77	81
23	74	80 z	89	92	83	81	95	81	73	75 ?	73	75	80	79
24	86	96	95	91	79	78	78	79	74	75 z	76 z	77	80	80
25	68	79	78	77	83	81	73	73	74	75	75	76	76	75
26	73	71	71	74 ?	74	75	75	75	75 ?	77	76	75	76	76
27	78	75	75	76	77	76	76	75 z	73	74	75 z	73	73	73
28	76	77	74	76	79	77	74	73	74	72 ?	70	72	74	77
29	76	77	78	93	91	79	75	68	72	73	74	75 ?	75 ?	77
30	73	75	77	76	76	75	75	74	75 z	74 z	74	75 z	77	77 z
31	67	68	68 z	68 z	68 z	68	68	68	68	66	65	66	68	68
Mean -	·61780	800	810	830	822	823	822	781	758	743	748	757	768	770

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Local Mean Time (Balance Magnetometer). *July* 1883.

3	4	5	6	7	8	9	10	11	12	Daily Means.	Highest Reading.	Lowest Reading.	Difference.
74	46	45	56	27	27	40	54	61	83	73	111	27	·0084
76	77	77	80	81	76	75	73	75	73	77	88	73	·0015
77	75	75	69	73	73	70	62	61	69	73	86	61	·0025
82	83 ?	83	82	72	74	77	68	82	73	78	93	68	·0025
85	81	55	46	55	64	64	66	68	78	77	114	46	·0068
77	77	78	75	74	75	77	77	76	75	77	87	73	·0014
75	73	74	75	76	77	77	74	84	86	76	86	72	·0014
82	79	73	77	75	75	73	75	76	76	81	118	66	·0052
72	74	80	83	71	69	67	75	73	106	77	106	67	·0039
82	82	71	43	56	75	77	78	81	80	79	117	43	·0074
88	78	47	47	52	45	65	73	68	73	73	88	45	·0043
80	78	80	81	78	79	80	77	73	67	79	87	67	·0020
78	77	77	71	78	79	78	77	75	75	81	103	67	·0036
75	75 ?	75 ?	77	77	77	78	77	76	75	82	135	64	·0071
69	73	75	78	73	70	69	39	75	68	73	87	39	·0048
76	76	78	75	68	63	76	71	82	86	78	99	63	·0036
76 ?	77	75	78	77	79	66	71	71	72	76	88	66	·0022
77	78	77	62	51	63	64	83	51	91	75	91	51	·0040
60	64	71	66	64	72 ?	70	65	76	68	74	87	60	·0027
76	75 ?	77	76	77	76	74	75	75	75	75	82	70	·0012
76	77	77	77	77	79	78	75	77	77	75	79	73	·0006
77	78	78	79	81	78	78	76	76	80	77	81	75	·0006
75	76	78	79	79	68	65	63	76	87	75	87	63	·0024
80	75	75	78 ?	58	71	72	74	68	73 ?	77	99	58	·0041
79	80	80	81	80	78	78	78	74	77	80	98	70	·0028
88	86	82	84	83	81	71	77	107	95	81	107	66	·0041
78	79	79	80	80	80	80	79	78	78	80	92	73	·0019
77	78	79	78	79	80	75	72 ?	72	67	76	80	67	·0013
77	77	77	68	<22	52	63	62	81	86	72	86	22	·0064
65	61	52	62	45	59	73	85	80	79	88	138	45	·0093
78	49	47	55	53 ?	31	53	66	68	75	81	149	31	·0118
77°	746	725	715	675	692	711	715	747	782	·61777	·6249	·6122	·0127

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. *August* 1883.

3	4	5	6	7	8	9	10	11	12	Daily Means.	Highest Reading.	Lowest Reading.	Difference.
89	73	77	82	68	56	66	81	112	86	86	114	56	·0058
82	82	83	84	75	81	83	82	81	81	83	96	75	·0021
82	83	83	84	82	80	83	80	81	77	82	92	77	·0015
81	81	81	81	81 ?	80	80	81	80	78	80	85	78	·0007
80	80	81	78	72	66	67	68	77	111	80	111	66	·0045
73	83	82	82	81	80	78	83	36	87	82	110	36	·0074
83	84	81	55	47	68	75	81	88	88	80	98	47	·0051
79	80	80	79	79	78	78	77	69	67	79	94	67	·0027
77	77	78	77	77	76	77	77	77	78	77	83	76	·0007
77	80	78	73	69	70	67	77	86	92	76	92	67	·0025
77	77	77	75	77	75	75	75	75	74	77	91	67	·0024
75	75	75	77	75	74	74	73	73	75	73	77	66	·0011
80	75 ?	75	74	76	75 ?	70	71	72	76	74	81	70	·0011
78	70	68	74	75	73	71	72	73	73	75	85	68	·0017
73	73	74	75	74	74	74	74	75	74	74	77	73	·0004
75	75	75	75	74	74	75	74	74	73	74	76	71	·0005
75	76	76	76	76	76	73	72	69	74	74	76	69	·0007
49	59	52	52	46	65	65 ?	71	75	78	80	132	46	·0086
76	74	75	75	75	73	75	75	77	85	75	85	73	·0012
76	77	77	77	78	77	77	75	71	68	76	84	68	·0016
78	81	79	81	78	75	77	74	75	72	76	84	68	·0016
72	80	69	73	76	76	72	75	72	72	75	91	65	·0026
81	78	77	79	76	79	71	55	73	81	78	95	55	·0040
81	79	78	78	77	77	73	55	65	77	78	96	55	·0041
77	77	77	77	77 ?	77	76	75	70	61	75	83	61	·0022
74	76	77	77	77	76 ?	75 ?	75	73	76	75	77	71	·0006
75	73	75	76	75	76	78	75	73	73	74	78	73	·0005
77	78	76	74	75	75	75 ?	73	73	75	74	79	70	·0009
75	78	77	77	77	77	73	72	81	73	76	93	68	·0025
78	78	69	68	69	69	69	68	68	68	73	78	68	·0010
67	68	68	68	69	69 ?	64	63	61	65	66	69	61	·0008
765	768	758	753	736	741	737	735	744	770	·61772	·6232	·6136	·0096

FORT RAE.

TERM DAY OBSERVATIONS.

September 15, 1882. $\phi = +62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	652	681	677	683	668	683	548	589	589	318	546	576
5	662	683	674	677	672	689	546	605	612	342	603	597
10	675	681	685	668	670	651	574	630	459	324	618	599
15	691	708	689	670	674	670	525	622	388	327	601	584
20	701	701	699	666	672	666	487	544	292	468	584	567
25	710	695	699	662	689	656	459	506	338	412	603	538
30	704	699	691	658	672	691	424	500	390	368	622	559
35	670	691	675	662	664	689	666	531	550	401	605	548
40	662	691	668	668	654	652	589	487	570	576	622	544
45	668	675	679	674	670	635	672	538	278	580	614	534
50	677	691	672	695	674	631	620	517	214	610	628	538
55	666	679	681	670	662	649	586	614	173	544	607	512

Declination. 39° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	1 25	1 26	1 32	1 27	1 24	1 29	1 59	1 37	−0 6	1 12	1 14	1 36
5	1 24	1 28	1 33	1 29	1 28	1 34	1 52	1 30	+0 41	0 51	1 12	1 23
10	1 20	1 26	1 30	1 30	1 28	1 42	1 48	1 23	0 30	0 47	1 3	1 25
15	1 21	1 26	1 30	1 21	1 29	1 58	1 40	1 26	0 57	1 24	1 25	1 34
20	1 18	1 25	1 28	1 21	1 30	2 11	2 9	1 48	0 57	1 32	1 44	1 37
25	1 21	1 32	1 25	1 34	1 33	1 59	2 19	1 29	1 0	1 4	1 34	1 48
30	1 29	1 31	1 28	1 33	1 34	2 4	2 30	1 29	1 4	1 3	1 36	1 49
35	1 28	1 32	1 28	1 33	1 35	1 54	3 7	0 58	1 29	0 50	1 22	1 40
40	1 29	1 35	1 32	1 32	1 34	1 57	3 0	0 54	0 10	1 12	1 26	1 36
45	1 28	1 36	1 30	1 30	1 31	1 48	2 39	1 0	0 37	1 10	1 38	1 44
50	1 32	1 29	1 30	1 28	1 26	2 16	2 19	3 9	1 48	1 21	1 36	1 41
55	1 27	1 30	1 29	1 26	1 26	2 3	1 54	0 29	0 50	1 30	1 40	1 43

Vertical Intensity. 0·6100 (C.G.S.) +

0	83	83	83	79	82	81	75	62	85	85	89	84
5	83	82	83	81	82	80	75	64	62	83	89	83
10	83	84	85	81	82	76	75	61	64	83	85	83
15	83	84	94	82	81	79	75	63	58	90	86	84
20	83	83	86	82	81	77	74	63	90	85	86	86
25	83	83	81	83	80	75	86	64	93	85	84	89
30	83	83	75	85	80	73	71	63	98	84	84	86
35	83	84	69	84	79	68	54	84	87	95	83	87
40	83	84	79	82	83	68	64	75	60	87	83	85
45	84	84	74	82	81	68	56	86	64	93	84	85
50	83	84	75	82	79	58	60	73	74	87	83	84
55	83	83	78	82	80	58	59	84	93	87	85	81

Auroral Observations.

h. m. A.M.	
4 50	Faint light in S.E. to 30° alt.!
4 55	Arch (1) S.E. to N.W., brighest in S.E., alt. to 12°.
4 58	Light more diffused, faint streamers in N.W.
5 0	Very indistinct arch, S.E. through Cassiopeia and γ and δ Ursæ Majoris.
5 4	Arch brighter, lower edge, through Capella, sharply defined.
5 7	A confused mass of curtain-shaped aurora (1) below arch, on horizon to E.S.E.
5 12	Above aurora brighter and moving to E.
5 17	The Pleiades now in the centre of this patch of aurora, more aurora in N.W., three parallel curtains.
5 28	Narrow streak of aurora, from near β Pegasi through zenith to within 10° of Arcturus.
5 30	Curve of aurora from N.N.W. on horizon through ζ and η Ursæ Majoris to the E. of Cassiopeia.
5 42	Bright patch of aurora between Cassiopeia and Saturn, wave of bright light moving towards Ursa Major.
5 52	A small patch of rapidly-moving aurora with faint vertical streamers near the horizon, below and to the N. of Capella. Aurora in N.W. passing between ζ Ursæ Majoris and Arcturus and above Ursa Major to Cassiopeia, moving to S., through zenith at 5.57, through α Lyræ at 6.2.
6 4	Another arch half-way between Ursa Major and horizon (·5).
6 8	Small patch (2) near Arcturus; the rest of the arch has a striated structure.
6 12	Arch from horizon to Arcturus, and from Aquila to Pegasus, and 10° above S.E. horizon; another from latter point, through Cassiopeia and ζ Ursæ Majoris to N.W. horizon; an irregular curve from Cassiopeia through Taurus towards S.E. horizon; all moving slowly, towards S.W.
6 22	Streamers on horizon to E.
6 27	Aurora on E. horizon, increasing, striated and with rapid motion, other arches less bright southernmost now 8° S.W. of Altair.
6 33	Cloud of aurora 20° to 30° in width, in zenith and to S.E., S., and N.W.
6 37	Sky more or less covered with faint aurora, except in S.W. from horizon to about 12° alt.
6 43	Aurora rather brighter and extending from zenith to E. and S. to 30° alt., fainter in N. and W.
6 53	Arch (1) from N.W. to S.E. through zenith. 6.58. Arch (·5) from N.W. to E.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *September* 15, 1882.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
491	548	593	647	693	683	660	645	651	645	656	645
476	557	593	647	679	685	656	639	651	649	670	635
493	563	614	651	687	683	662	647	651	651	649	632
533	576	612	652	697	681	660	645	651	654	639	626
534	580	628	660	701	679	656	647	656	656	624	635
540	607	612	660	689	681	651	643	654	658	620	641
531	572	628	658	681	675	647	651	654	658	626	643
534	589	637	654	675	670	651	647	656	660	614	649
531	589	630	666	687	664	649	651	658	664	618	651
548	584	635	658	691	668	645	651	658	672	620	643
534	574	651	670	685	656	645	651	660	674	630	645
561	580	658	691	685	656	645	651	658	664	653	—

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 58	1 54	1 54	1 51	1 50	1 40	1 43	1 49	1 30	1 31	1 32	1 28
2 0	2 0	1 54	1 52	1 48	1 40	1 44	1 44	1 30	1 27	1 33	1 28
2 5	1 56	1 49	1 50	1 44	1 43	1 44	1 38	1 29	1 29	1 32	1 30
1 42	1 55	1 52	1 48	1 43	1 44	1 44	1 34	1 32	1 32	1 30	1 30
1 52	1 58	1 48	1 48	1 44	1 42	1 44	1 31	1 28	1 30	1 30	1 30
2 8	1 48	1 52	1 46	1 44	1 44	1 44	1 30	1 29	1 30	1 30	1 31
2 8	1 58	1 50	1 51	1 47	1 41	1 48	1 32	1 31	1 29	1 30	1 31
1 57	1 55	1 52	1 50	1 46	1 40	1 45	1 30	1 32	1 29	1 28	1 30
1 53	2 1	1 22	1 49	1 44	1 42	1 42	1 30	1 32	1 29	1 28	1 32
1 45	2 7	1 54	1 53	1 41	1 41	1 42	1 30	1 34	1 30	1 38	1 30
1 50	2 2	1 55	1 52	1 39	1 32	1 45	1 30	1 32	1 30	1 30	1 29
1 52	2 0	1 50	1 47	1 43	1 43	1 50	1 30	1 32	1 32	1 29	—

Vertical Intensity.

80	86	83	78	79	77	77	78	78	79	81	81
84	84	83	79	81	77	77	77	78	79	81	80
85	86	82	79	81	77	77	77	78	79	80	81
86	87	81	79	80	80	78	78	77	79	80	81
81	86	79	78	80	77	79	76	78	79	78	81
82	86	77	78	80	77	78	78	78	79	79	80
86	87	79	78	81	77	78	77	77	80	79	80
88	86	78	78	79	77	78	77	79	80	79	81
87	86	77	79	79	77	78	77	79	81	80	81
86	85	77	78	79	77	77	77	79	79	80	79
84	84	77	79	77	78	77	77	79	79	80	80
85	84	78	80	76	77	78	78	78	81	81	—

Auroral Observations.

h. m. A.M.	
7 2	Aurora very faint, except in S.E. 7.7. Aurora very dim in all directions.
7 12	Arch on N.E. horizon passing between α and β Geminorum. Steady band of auroral light about 10° higher.
7 23	The arch in E. has risen about 5° and has almost disappeared
7 24	Faint auroral light in N. and S.W., about 30° alt. 7.33. Disappeared.
7 38	Arch from N.W. to S.E. (2), crimson and violet colours, disappearing directly, except in N.W., where it broke into patches (1), patches also in S.E.
7 48	Serpentine aurora (1) from S.E. to N.W., prismatic (2) in N.W.
7 51	Serpentine aurora disappeared except from N.W. zenith (3), prismatic in N.W. to 15° alt.
7 56	Aurora disappeared, except a prismatic patch (2) in N.W.; faint patch in S.E.
7 59	Became dim and almost disappeared except in N.W.
8 0	Curtain-shaped aurora (2) in N.W. to alt 10°. 8.1. Ditto, formed into an arch (1) to S.E. 8.2. Ditto, brighter.
8 4	Arch in zenith (1) N.E. to S.W. 8.5. Arch disappeared.
8 7	Faint aurora from N. to S.E., 10° alt.
8 9	Broke up and became curtain-shaped from N.W. to S. and from N. to E.
8 10	Aurora nearly disappeared except a patch in N.E.
8 17	Faint patches in S.E., N., and S.W. 8.21. Aurora disappeared.
8 23	Arch (1) N. to E. 8.28. Aurora entirely disappeared. 8.45. Auroral light in N. and several patches in zenith. 8.50. Faint patch in N.W.
9 0	Auroral light in N.E. 9.7. Faint patch in N. and S.E. 9.13. Auroral light in N., 5° alt. 9.17. Very faint patch on N.W. horizon.
9 27	Auroral light in N., moving rapidly to E. 9.33. Ditto, disappeared except a patch in N.
9 39	Auroral band from N. to E. 9.47. Faint patch in N.E. till 10.2.
10 9	Faint band W. to N.E. 10.18. Faint patch in N. to N.W. 10.23. Very faint band S.E. to S.W. 10.30. Very faint, remained stationary till 10.56.
10 57	Faint band from N.W. to E. 11.17. Auroral light in N.W. 11.25. Faint band from W. to E. 11.40. Very faint band S.W. to S.E.

October 1, 1882. $\phi = +62° 38' 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	656	662	658	672	668	679	674	656	651	624	641	452
5	654	664	660	670	666	683	676	658	651	609	643	444
10	654	664	660	668	670	685	674	654	643	628	641	459
15	656	664	660	666	674	681	674	652	633	616	624	474
20	658	662	660	666	679	679	670	649	637	620	633	487
25	658	664	668	666	679	679	662	645	647	624	633	512
30	658	662	672	662	679	679	658	647	616	628	576	500
35	660	662	670	662	676	679	660	639	628	620	517	516
40	662	662	670	666	674	679	662	647	620	620	504	542
45	662	662	674	666	677	675	662	654	628	633	454	570
50	660	662	670	666	675	677	654	647	628	641	465	597
55	658	662	670	668	679	674	658	651	624	647	455	616

Declination. 40° +

	°	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	0 16	0 18	0 18	0 16	0 17	0 19	0 17	0 17	0 22	0 12	0 22	1 0
5	0 17	0 18	0 17	0 16	0 18	0 19	0 18	0 18	0 20	0 18	0 20	1 1
10	0 18	0 18	0 17	0 16	0 17	0 18	0 18	0 19	0 22	0 6	0 26	0 56
15	0 18	0 19	0 17	0 18	0 16	0 18	0 18	0 20	0 21	0 4	0 24	0 58
20	0 18	0 19	0 17	0 17	0 16	0 18	0 19	0 21	0 21	0 8	0 30	0 58
25	0 17	0 18	0 16	0 17	0 16	0 18	0 18	0 22	0 25	0 17	0 29	0 46
30	0 18	0 18	0 16	0 17	0 16	0 18	0 20	0 20	0 20	0 20	0 35	0 44
35	0 16	0 18	0 15	0 16	0 18	0 16	0 19	0 22	0 19	0 21	0 34	0 45
40	0 17	0 18	0 15	0 17	0 18	0 17	0 18	0 22	0 19	0 16	0 36	0 42
45	0 18	0 19	0 15	0 17	0 18	0 16	0 18	0 20	0 20	0 12	1 19	0 39
50	0 18	0 18	0 15	0 17	0 19	0 17	0 18	0 11	0 20	0 18	0 47	0 33
55	0 18	0 18	0 16	0 18	0 19	0 16	0 18	0 25	0 16	0 18	0 48	0 29

Vertical Intensity. 0·6100 (C.G.S.) +

0	75	75	75	73	73	74	74	73	71	74	77	86
5	75	75	75	73	73	74	75	73	71	74	77	81
10	75	75	75	72	73	74	75	73	68	74	78	83
15	75	75	75	72	73	74	74	73	70	75	79	82
20	75	75	74	71	73	74	74	73	70	75	80	84
25	75	75	74	73	73	74	74	75	72	75	83	83
30	75	75	74	71	74	74	74	72	74	77	83	81
35	75	75	74	73	74	74	73	71	74	77	83	80
40	75	75	74	73	74	74	73	73	75	75	85	80
45	76	75	73	74	74	74	72	73	76	76	84	79
50	76	76	73	74	74	74	72	71	75	76	90	78
55	75	76	73	73	74	74	73	70	75	78	87	77

Auroral Observations.

h.	m.	
A.M.		
5	58	Faint patches of aurora in zenith about 10° wide.
6	22	Faint streak about 5° from zenith to N.W. horizon, about 20° alt.
6	27	Faint arch through zenith from N.W. to S.E. (·5). Parallel arch (·5) 5° to S.
7	8	Arch (1) 30° alt. in N.W. through zenith to about 30° alt. in S.E.
7	17	A few faint streamers in S.E. between the moon and horizon.
7	52	Very faint.
7	57	Patch (1) in E., about 5° alt. Faint patch in zenith.
8	8	Broad arch (1) about 20° alt. in N.W. to zenith, and extending in two arches to S.E. and E. horizon.
8	27	Faint patches in zenith and N.W. horizon.
8	40	Faint streamers in N.W.
8	45	Aurora disappeared except a faint broad patch about 10° alt. in N.W.
8	57	Serpentine arch in N.W., about 10° alt., extending to zenith, and from thence in vertical streamers (1).
9	0	,, disappeared.
9	4	Broad diffused patch in zenith (1).
9	5	Faint arch from N.W. to zenith.
9	15	Large circular patch (1) in zenith, patch in E.
9	20	,, extending in a V-shape toward S.E., and in vertical streamers to N.
9	24	Irregular arch (·5) through zenith.
9	27	Faint aurora through zenith.
9	33	Streamers (1) from 40° alt. in N.W. to 5° S.W. of zenith.
9	52	Aurora disappeared except a faint patch 20° alt. in W.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *October* 1, 1882.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
637	668	666	630	624	651	647	635	631	628	637	641
649	670	668	632	635	649	645	635	630	628	637	643
656	679	660	639	616	651	643	637	635	632	639	641
658	683	660	639	614	647	645	637	630	630	635	641
660	679	664	637	626	643	643	635	630	632	633	641
662	675	666	639	626	643	643	635	628	633	635	643
672	668	672	633	633	643	639	635	628	633	633	645
674	666	668	626	635	643	639	631	628	632	635	643
674	666	664	622	652	649	639	631	626	632	635	645
674	664	658	635	654	651	639	631	626	635	641	—
674	666	645	622	658	649	639	631	228	635	639	—
672	666	631	622	647	647	637	633	628	639	641	—

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0 25	0 20	0 22	0 40	0 44	0 39	0 32	0 31	0 22	0 19	0 17	0 15
0 23	0 20	0 20	0 39	0 42	0 38	0 32	0 30	0 22	0 20	0 17	0 14
0 20	0 17	0 24	0 38	0 46	0 36	0 33	0 30	0 24	0 20	0 17	0 16
0 20	0 16	0 27	0 41	0 46	0 36	0 32	0 30	0 22	0 20	0 17	0 17
0 20	0 16	0 27	0 40	0 44	0 36	0 31	0 30	0 21	0 20	0 15	0 17
0 19	0 17	0 29	0 40	0 44	0 36	0 30	0 26	0 20	0 16	0 16	0 16
0 17	0 20	0 29	0 37	0 43	0 36	0 30	0 25	0 22	0 17	0 16	0 15
0 18	0 20	0 27	0 39	0 44	0 36	0 30	0 26	0 19	0 17	0 15	0 17
0 18	0 21	0 25	0 39	0 40	0 34	0 31	0 25	0 20	0 18	0 16	0 16
0 18	0 22	0 25	0 42	0 44	0 33	0 32	0 25	0 21	0 19	0 16	—
0 20	0 20	0 30	0 45	0 38	0 34	0 31	0 25	0 20	0 19	0 15	—
0 20	0 21	0 35	0 46	0 38	0 33	0 30	0 23	0 19	0 18	0 16	—

Vertical Intensity.

76	74	76	76	73	73	74	76	76	76	77	76
75	74	76	75	73	73	74	75	76	76	76	76
75	74	76	76	71	72	74	74	76	76	76	76
75	74	76	76	71	72	74	74	76	76	76	76
74	74	76	76	71	73	75	75	76	77	76	76
74	75	76	77	71	73	75	75	76	78	76	76
74	75	77	77	71	73	75	75	75	78	76	76
74	75	77	76	71	73	75	75	75	78	76	76
74	75	77	76	72	73	75	76	76	77	76	76
74	75	78	76	72	74	75	76	76	77	76	—
74	75	78	75	72	74	76	76	76	77	76	—
74	76	77	75	73	74	76	76	76	77	76	—

Auroral Observations.

h. m. A.M.	
10 12	Streamers (1) on W. horizon.
10 20	Streamers (1) 10° alt. in W.
10 23	Patches (1) from W. to S.E., 2° W. of zenith.
10 27	Aurora (1) from W. to S.E.
10 29	„ diffused and slightly prismatic (2).
10 35	Irregular masses of aurora (1) in N.W. moving towards S.E.
10 39	Aurora from W. to N.E., 20° alt. in N.E., with streamers (2).
10 45	Patches on N.W. horizon.
10 47	„ very faint and moving towards S.W.
10 50	„ disappeared except a small patch on N.W. horizon.
10 55	Faint irregular arch from N.W. to 25° alt. N.E.
10 57	„ disappeared.
11 3	Auroral light on N.W. horizon.
11 5	Faint arch N.W. to N.E.
11 17	Patches of auroral light 15° alt. in N.W.
11 19	„ extending in irregular form towards N.E. horizon.
11 20	Very faint arch from W. to N.E., 15° N. of zenith.
11 33	Faint patch on N.W. horizon.
11 39	„ disappeared, clouds increasing.
11 47	Patch 5° alt. in N.W. moving towards S.
12 5	Faint streamers in N.W.

October 15, 1882. $\Phi = +62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	708	765	755	707	658	683	664	536	379	261	588	487
5	718	769	737	710	681	678	660	533	212	546	578	533
10	730	771	759	656	679	668	666	495	267	531	531	527
15	720	757	743	662	716	656	714	422	205	514	435	563
20	728	767	728	674	681	660	683	482	165	403	450	645
25	716	767	718	612	714	651	677	303	185	403	504	654
30	705	780	710	589	761	656	685	396	249	394	519	656
35	722	761	706	645	765	660	699	485	261	448	514	628
40	722	757	697	630	728	660	672	557	191	515	508	605
45	730	765	689	647	734	649	601	422	373	570	517	551
50	743	765	695	666	691	714	597	412	357	620	455	534
55	751	763	732	639	679	660	533	320	318	578	482	420

Declination. 39° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	1 19	1 8	1 12	1 21	1 26	1 20	1 32	1 18	2 11	2 14	1 24	1 50
5	1 17	1 10	1 18	1 18	1 27	1 22	1 34	1 18	2 28	1 23	1 22	1 50
10	1 18	1 2	1 10	1 20	1 24	1 19	1 34	1 33	3 10	1 1	1 24	1 44
15	1 16	1 13	1 12	1 14	1 28	1 23	1 31	1 21	2 58	1 45	1 48	1 51
20	1 20	1 12	1 15	1 39	1 28	1 23	1 26	1 26	2 28	1 36	2 16	1 30
25	1 26	1 2	1 12	2 5	1 16	1 27	1 21	1 28	2 38	1 46	1 43	1 32
30	1 19	1 10	1 8	2 20	1 8	1 26	1 16	0 50	2 30	1 50	1 30	1 42
35	1 19	1 12	1 14	1 44	1 14	1 27	1 14	0 55	2 39	1 51	2 0	1 46
40	1 17	1 14	1 14	1 34	1 21	1 29	1 18	1 4	2 34	1 38	1 54	1 49
45	1 16	1 13	1 19	1 30	1 16	1 40	1 15	0 57	2 2	1 30	2 15	2 5
50	1 12	1 10	1 14	1 36	1 21	2 0	1 5	1 15	2 11	1 27	2 29	2 5
55	1 11	1 12	1 12	1 38	1 19	1 46	1 14	1 50	2 28	1 30	1 42	2 12

Vertical Intensity. 0·6100 (C.G.S.) +

0	75	75	71	67	64	67	66	84	65	92	92	76
5	76	75	72	68	64	63	66	84	113	79	94	75
10	76	75	73	68	63	65	65	85	93	58	90	73
15	75	75	73	65	66	64	64	83	79	76	74	83
20	75	73	73	66	60	63	64	82	83	66	77	84
25	76	74	69	66	58	64	70	84	94	79	77	85
30	76	73	70	66	56	63	66	70	100	75	79	86
35	76	74	67	61	62	70	66	94	87	49	92	88
40	76	73	67	63	62	65	63	96	89	52	83	89
45	76	73	66	62	62	63	62	68	92	58	83	94
50	76	73	64	64	62	62	70	82	80	56	70	100
55	76	73	69	64	64	62	72	87	94	91	80	101

Auroral Observations.

h.	m.	
A.M.		
6	20	Sky overcast, but faint light all over the sky, showing yellow auroral line in spectroscope.
7	55	Faint masses of auroral light in zenith and S.W., about 30° alt.
9	45	Sky dark and clouded, light entirely disappeared.
10	15	Sky overcast, but faint light from E. to N.W. horizon.
10	25	Patch of aurora (1) about 50° alt. in S.E.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *October* 15, 1882.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
401	439	399	331	292	414	620	664	653	654	666	699
305	489	412	318	245	500	651	639	651	660	668	722
269	480	420	362	267	482	651	643	656	668	662	718
296	439	409	351	320	497	641	618	664	653	674	687
285	437	375	342	303	536	641	639	664	662	674	660
346	439	377	303	315	589	654	641	687	676	676	666
353	411	318	335	344	569	653	649	730	685	678	668
407	368	281	278	331	626	670	637	689	670	707	679
461	338	361	302	383	635	649	649	670	658	693	672
484	335	340	258	407	609	633	649	641	664	693	678
474	305	337	300	385	597	622	656	643	670	689	679
454	335	322	300	388	591	660	651	637	670	681	679

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 49	2 22	1 31	3 24	2 46	2 27	1 34	1 29	1 26	1 19	1 18	1 18
2 50	2 21	2 56	2 18	2 50	2 40	1 36	1 28	1 24	1 18	1 18	1 13
2 58	2 42	2 30	4 8	2 56	3 4	1 34	1 33	1 22	1 17	1 18	1 13
2 50	2 4	3 10	3 40	3 8	2 26	1 36	1 28	1 20	1 15	1 18	1 18
2 58	1 54	3 4	2 32	2 25	2 5	1 42	1 35	1 19	1 19	1 20	1 21
2 8	2 0	2 46	2 35	3 3	1 49	1 40	1 33	1 20	1 15	1 18	1 20
2 17	1 48	3 15	2 20	3 3	1 47	1 32	1 30	1 48	1 11	1 18	1 20
2 19	1 56	2 50	2 48	3 16	1 41	1 36	1 24	1 20	1 15	1 11	1 20
2 27	2 14	4 10	2 30	2 18	1 43	1 33	1 30	1 16	1 17	1 18	1 20
2 16	1 52	3 56	3 10	3 39	1 41	1 32	1 27	1 20	1 18	1 20	1 20
2 3	2 25	3 26	3 10	2 33	1 31	1 30	1 18	1 18	1 20	1 18	1 20
2 3	3 24	3 56	2 10	2 36	1 38	1 33	1 24	1 16	1 18	1 22	1 20

Vertical Intensity.

93	103	114	98	77	69	76	73	75	76	75	79
88	100	106	71	85	66	73	75	75	76	75	79
102	106	99	71	92	84	70	73	76	76	75	79
99	113	103	98	99	78	70	75	76	75	76	79
98	104	100	91	94	75	71	75	76	75	76	77
113	104	92	75	90	75	71	74	75	76	76	77
108	105	102	79	90	73	73	74	75	75	76	77
106	100	98	83	83	73	73	75	75	76	77	78
106	108	90	78	70	73	73	76	75	76	78	77
105	105	94	74	75	70	73	75	74	76	77	77
104	93	93	89	75	76	75	75	74	76	79	77
105	98	89	96	71	76	74	77	75	76	79	77

Auroral Observations.

H.	M.	
A.M.		
10	50	Patches in zenith visible between clouds.
11	25	Masses of aurora in zenith and about 5° S. of zenith. Sky cloudy.
P.M.		
12	15	Patches visible through clouds in S.E. horizon.
1	10	Bright aurora (2) from S.W. to N.W. horizon, partly visible between clouds.
1	30	Bright patch in S.W. about 50° alt.

November 1, 1882. $\phi = +62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	670	683	714	722	726	714	691	703	656	707	651	607
5	674	683	720	720	728	712	678	697	654	639	656	599
10	679	679	714	712	732	701	687	703	687	643	674	563
15	678	693	714	712	730	699	699	699	674	649	683	561
20	679	695	718	716	732	703	703	708	670	639	689	578
25	683	699	718	720	718	699	701	697	660	612	681	584
30	687	693	720	718	710	695	697	691	674	622	676	597
35	683	693	710	734	730	691	689	687	685	645	614	603
40	681	695	714	710	749	691	689	683	701	633	630	643
45	683	703	726	701	743	695	697	681	687	660	618	666
50	687	705	732	697	730	697	707	664	689	678	610	678
55	683	708	722	712	722	697	705	666	668	660	601	676

Declination. 40° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	0 26	0 26	0 22	0 21	0 36	0 26	0 26	0 22	0 30	0 23	0 38	0 39
5	0 24	0 27	0 23	0 21	0 35	0 24	0 26	0 24	0 33	0 26	0 37	0 38
10	0 24	0 28	0 22	0 26	0 32	0 23	0 24	0 24	0 46	0 27	0 40	0 42
15	0 24	0 25	0 23	0 27	0 26	0 28	0 25	0 28	0 46	0 30	0 28	0 42
20	0 25	0 24	0 26	0 28	0 22	0 25	0 24	0 27	0 40	0 30	0 30	0 42
25	0 24	0 23	0 26	0 26	0 24	0 28	0 22	0 21	0 37	0 32	0 31	0 43
30	0 24	0 22	0 26	0 26	0 24	0 27	0 23	0 23	0 33	0 36	0 36	0 43
35	0 25	0 25	0 28	0 30	0 20	0 25	0 26	0 25	0 32	0 26	0 46	0 42
40	0 25	0 24	0 22	0 35	0 14	0 26	0 24	0 26	0 26	0 35	0 38	0 32
45	0 24	0 24	0 21	0 44	0 16	0 26	0 23	0 26	0 29	0 32	0 41	0 30
50	0 24	0 23	0 24	0 42	0 22	0 26	0 22	0 26	0 30	0 27	0 43	0 29
55	0 26	0 24	0 23	0 40	0 23	0 26	0 21	0 26	0 31	0 29	0 43	0 30

Vertical Intensity. 0·6100 (C.G.S.) +

0	80	80	80	79	76	82	79	76	76	77	84	92
5	80	80	80	79	77	81	79	76	74	76	84	91
10	80	80	80	79	77	81	79	76	71	77	84	92
15	79	81	81	79	78	80	78	76	70	79	81	89
20	80	80	81	80	79	81	77	74	71	79	83	89
25	80	80	80	79	79	79	77	75	69	82	84	89
30	80	80	80	79	79	80	77	76	70	81	85	88
35	80	81	80	77	78	79	79	76	72	83	90	88
40	80	81	79	77	80	80	78	77	74	85	90	87
45	79	81	80	77	81	80	77	77	74	83	90	86
50	80	80	80	78	82	79	77	76	74	82	90	84
55	80	80	80	77	82	79	77	77	75	84	92	85

Auroral Observations.

h.	m.	
A.M.		
2	5	Faint arch (1) from N.N.W. to N.E., 15° alt.
2	17	,, almost disappeared. Faint streamers in N.N.W. (·5).
2	27	Arch brighter and lower, passing through Pleiades, brightest in N.E.
2	35	,, disappeared except a faint patch in N.E.
2	40	Arch reappeared (1).
2	58	,, increasing in width. Faint streamers in N.N.W.
3	15	Arch very faint, except in N.E.
3	30	Arch bright (1) and streamers in N.W.
4	0	Arch very irregular (1), bright broad patch (2) in E.N.E.
4	25	Aurora very faint from N.W. to N.E.
5	5	Faint auroral light in S.S.W. at the edge of a cloud. Arch in N.E. disappeared except a very faint light in N.N.W.
5	25	Aurora entirely disappeared.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *November* 1, 1882.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
664	628	633	444	424	676	654	656	649	664	687	662
670	632	641	414	480	674	656	656	653	676	676	674
668	647	628	351	482	674	643	641	660	681	676	681
635	654	601	344	500	649	664	649	664	683	670	683
633	645	584	336	484	633	678	658	651	683	676	660
633	641	559	388	521	672	674	656	653	685	664	710
635	639	519	370	567	683	672	668	653	683	670	703
614	630	480	353	603	666	670	651	658	681	662	718
601	618	452	361	632	664	666	654	656	679	662	718
610	618	439	351	664	662	662	651	658	681	653	670
624	626	—	355	674	660	662	654	651	679	643	710
626	628	437	388	670	649	662	658	651	687	653	707

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0 34	0 42	0 44	1 21	1 6	0 54	0 34	0 31	0 18	0 19	0 20	0 25
0 32	0 42	0 42	1 12	1 26	0 54	0 35	0 16	0 19	0 21	0 20	0 22
0 31	0 36	0 41	1 28	1 14	0 51	0 34	0 26	0 16	0 18	0 21	0 20
0 36	0 35	0 46	2 14	1 22	0 51	0 32	0 27	0 4	0 18	0 22	0 20
0 38	0 36	0 48	1 50	1 10	0 40	0 38	0 27	0 14	0 16	0 20	0 20
0 35	0 38	0 57	1 40	1 0	0 39	0 25	0 27	0 16	0 18	0 21	0 18
0 36	0 37	1 19	1 54	1 2	0 39	0 34	0 30	0 17	0 18	0 22	0 18
0 42	0 38	1 12	1 50	0 58	0 37	0 33	0 32	0 26	0 17	0 22	0 16
0 46	0 41	1 24	2 0	0 50	0 35	0 36	0 28	0 14	0 18	0 24	0 22
0 46	0 40	1 22	1 45	0 44	0 34	0 30	0 24	0 4	0 19	0 25	0 20
0 44	0 47		1 48	0 50	0 22	0 29	0 22	0 10	0 21	0 26	0 20
0 44	0 50	1 46	1 23	0 51	0 32	0 24	0 14	0 18	0 20	0 24	0 21

Vertical Intensity.

82	83	87	106	79	78	77	80	83	83	86	86
82	82	88	104	74	80	77	81	83	84	86	86
82	82	89	95	76	79	79	80	83	84	86	84
83	83	92	92	73	78	80	81	81	85	85	84
83	84	94	86	81	78	80	82	81	85	85	85
83	84	99	86	85	77	81	82	81	85	84	85
83	85	103	86	84	77	81	83	82	85	84	85
84	86	103	81	83	77	81	84	82	85	84	85
84	87	105	80	83	77	82	84	82	85	84	84
83	87	106	85	82	77	82	84	82	86	85	86
82	87	not read	82	81	77	81	84	83	86	84	86
83	87	104	80	80	77	82	83	82	86	85	87

Auroral Observations.

h.	m.	
A.M.		
10	20	Diffused arch (2) from S.E. through zenith to N.W. horizon.
10	30	Arch disappeared.
10	35	Diffused light in N.W. drifting towards S.W., slightly prismatic.
10	40	„ disappeared except a few faint streamers in N.W. horizon.
10	50	„ disappeared.
11	0	Auroral light in zenith (1).
11	8	Bright patch (2) on N.W. horizon.
11	50	Faint arch from E.S.E. through zenith to W.N.W. (1) in N.N.W.
P.M.		
12	10	Aurora disappeared.
2	25	Streak of auroral light on N.E. horizon.

November 15, 1882. $\phi = +62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	1,069	1,025	1,110	984	966	841	525	609	714	216	691	607
5	1,112	1,000	1,077	1,077	816	736	609	599	730	337	749	512
10	1,069	976	1,045	958	932	806	605	572	687	283	660	517
15	1,099	920	1,065	798	976	833	635	678	651	307	741	465
20	1,047	934	1,093	736	928	806	643	712	628	405	647	489
25	1,039	958	1,097	720	820	826	759	697	489	470	653	516
30	956	1,000	1,097	707	913	757	745	722	−124	893	730	569
35	966	976	1,057	707	952	697	728	741	300	664	763	570
40	936	1,183	1,029	695	1,155	630	753	753	324	569	691	582
45	980	1,222	984	732	1,087	643	747	765	309	705	660	591
50	1,002	1,138	936	726	948	712	712	775	375	687	512	576
55	1,025	1,087	944	763	869	567	641	738	113	693	605	569

Declination. 37° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	3 59	3 40	3 47	3 7	3 55	1 20	3 29	3 15	2 58	1 20	2 57	3 0
5	4 9	3 34	3 45	3 0	2 29	1 37	3 32	3 19	3 3	1 40	3 0	3 14
10	3 59	3 24	3 39	3 33	2 24	1 42	3 46	3 10	3 20	0 40	3 14	3 6
15	3 57	3 24	3 47	4 8	2 7	2 11	3 56	3 3	3 20	0 52	3 0	3 34
20	3 47	3 42	3 42	3 51	1 51	2 26	4 20	2 46	3 16	0 20	2 55	3 35
25	3 50	3 38	3 31	3 19	1 58	2 45	4 12	3 17	4 28	2 1	3 17	3 33
30	3 37	3 30	3 27	2 58	1 40	2 26	3 56	2 44	3 0	1 5	2 49	3 42
35	3 34	3 7	3 30	3 31	1 20	2 24	3 49	2 43	1 50	1 0	3 14	3 56
40	3 38	3 18	3 35	2 57	1 20	2 11	3 33	2 34	0 52	1 5	2 25	3 46
45	3 28	4 9	3 19	3 3	1 38	2 34	3 18	2 6	0 55	2 8	2 32	3 56
50	3 28	3 52	3 17	3 5	1 25	3 10	3 9	2 19	1 27	2 24	3 19	4 3
55	3 29	3 54	3 14	3 51	1 19	3 24	2 58	2 40	1 51	2 27	3 16	4 6

Vertical Intensity. 0·6100 (C.G.S.) +

0	106	105	92	79	42	48	90	79	94	99	67	64
5	101	98	89	73	46	52	86	79	95	99	69	64
10	95	99	91	57	60	63	86	81	95	99	73	66
15	100	100	93	61	59	62	88	79	94	99	66	70
20	101	102	85	61	62	69	88	79	96	98	63	70
25	101	99	83	63	67	72	83	85	100	98	54	71
30	103	98	86	60	85	75	79	87	99	98	49	75
35	102	98	83	52	77	79	81	86	99	98	58	79
40	101	96	85	53	74	82	80	89	99	98	66	79
45	103	90	80	66	74	85	80	96	99	—	76	77
50	101	89	86	64	69	81	78	96	99	80	67	74
55	98	93	84	56	63	83	82	93	99	71	66	77

Auroral Observations.

h. m.	
A.M.	
6 0	Sky overcast but very light, aurora probably behind clouds.
P.M.	
12 20	Sky became dark.

$\lambda = -115° 43' 50'' = -7h. 42m. 55s.$ Göttingen Mean Time. *November* 15, 1882.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
578	699	551	595	643	605	589	641	668	668	687	740
582	784	597	666	589	624	500	664	672	666	670	722
584	745	589	656	588	574	548	641	654	672	699	693
632	726	597	612	597	544	531	645	666	695	658	708
601	681	523	538	589	570	559	647	662	678	691	678
603	589	516	588	569	538	582	643	674	679	699	710
618	559	548	586	561	565	586	664	666	689	697	691
678	603	512	649	589	635	626	660	681	656	683	695
681	626	561	578	550	637	645	647	695	681	697	714
687	654	557	591	542	643	660	643	685	687	707	664
672	553	559	637	544	614	656	662	687	681	703	689
687	714	582	656	533	588	653	664	679	683	693	720

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
4 12	4 16	4 47	3 49	3 53	3 50	4 26	3 42	3 29	3 20	3 10	3 20
4 13	3 44	4 23	3 51	4 2	3 56	4 30	3 36	3 32	3 18	3 26	3 17
4 9	3 38	4 20	3 46	4 2	4 6	4 20	3 38	3 34	3 22	3 9	3 18
4 2	3 50	4 22	3 59	4 3	3 51	4 17	3 32	3 26	3 17	3 17	3 18
4 2	3 36	4 27	4 9	3 56	4 14	4 25	3 38	3 29	3 18	3 13	3 34
4 35	4 6	4 26	4 14	4 2	4 23	4 13	3 40	3 27	3 25	3 21	3 14
4 34	3 59	4 10	3 53	4 6	4 23	4 7	3 26	3 25	3 18	3 11	3 32
4 15	3 44	4 22	3 52	3 52	4 14	3 50	3 35	3 19	3 21	3 20	3 16
4 19	3 44	4 9	4 4	4 14	4 2	3 51	3 32	3 17	3 12	3 22	3 14
4 15	4 24	4 10	4 2	4 16	3 52	3 41	3 27	3 20	3 9	3 21	3 17
4 29	4 29	4 5	3 40	4 20	4 3	3 56	3 23	3 20	3 12	3 22	3 20
4 22	3 50	3 59	3 44	4 21	4 6	3 44	3 30	3 22	3 12	3 25	3 28

Vertical Intensity.

71	56	70	53	47	40	48	43	47	46	51	54
69	52	61	63	46	37	45	40	44	47	52	51
74	55	59	51	46	39	42	41	44	47	53	50
71	58	64	51	46	41	42	43	44	48	50	51
73	66	56	49	40	41	41	42	45	48	52	50
75	66	54	50	46	39	40	43	45	49	48	54
69	63	61	51	46	43	40	43	43	49	51	52
71	68	52	45	42	44	41	46	46	47	52	55
70	71	51	49	41	47	41	46	46	50	51	52
68	69	49	45	42	49	40	45	45	51	52	51
61	65	51	47	43	46	42	45	47	50	51	51
60	64	49	49	44	44	42	46	46	51	53	54

December 1, 1882. $\phi = +\ 62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	763	701	705	740	685	679	641	601	639	616	654	662
5	716	703	681	714	685	672	639	609	639	610	654	666
10	740	691	691	699	681	672	641	591	643	620	647	668
15	701	693	963	710	674	668	649	622	651	633	643	656
20	740	703	691	703	676	654	656	647	666	649	632	645
25	703	738	683	697	670	651	670	653	668	656	630	637
30	749	743	701	687	656	651	664	651	653	664	628	603
35	743	728	714	679	647	641	654	628	672	660	639	614
40	743	701	722	687	670	654	649	635	674	666	641	641
45	732	705	761	689	681	654	551	632	679	670	647	649
50	697	701	781	691	689	647	542	609	662	676	651	645
55	707	703	784	685	697	641	563	626	605	674	649	595

Declination. 39° +

	′	′	′	′	′	′	′	′	′	′	′	′
0	1 19	1 16	1 14	1 10	1 20	1 22	1 14	0 58	1 22	1 14	1 11	1 22
5	1 16	1 17	1 18	1 8	1 18	1 20	1 14	1 9	1 23	1 11	1 13	1 19
10	1 21	1 17	1 16	1 10	1 18	1 18	1 13	1 20	1 24	1 12	1 15	1 21
15	1 14	1 20	1 18	1 14	1 21	1 17	1 16	1 24	1 24	1 12	1 17	1 20
20	1 14	1 16	1 18	1 14	1 22	1 21	1 18	1 20	1 21	1 16	1 18	1 21
25	1 20	1 9	1 20	1 12	1 22	1 19	1 16	1 22	1 24	1 18	1 18	1 25
30	1 10	0 59	1 19	1 10	1 21	1 20	1 18	1 30	1 29	1 18	1 21	1 36
35	1 8	1 9	1 12	1 12	1 21	1 22	1 20	1 26	1 16	1 20	1 20	1 23
40	1 12	1 16	1 4	1 17	1 24	1 18	1 17	1 22	1 0	1 21	1 20	1 25
45	1 12	1 15	0 50	1 20	1 23	1 16	1 24	1 22	1 8	1 20	1 21	1 26
50	1 14	1 15	0 51	1 22	1 24	1 16	1 9	1 24	1 20	1 14	1 21	1 31
55	1 12	1 14	1 3	1 22	1 26	1 16	1 2	1 23	1 17	1 12	1 22	1 29

Vertical Intensity. 0·6100 (C.G.S.) +

0	71	70	70	69	69	73	75	70	78	70	76	75
5	70	70	70	69	69	73	74	68	79	73	77	75
10	69	70	69	69	69	73	75	68	79	74	77	75
15	70	70	69	68	70	73	74	71	79	76	76	75
20	70	69	70	68	70	74	74	72	77	77	76	76
25	70	69	70	68	70	75	73	71	77	78	76	77
30	70	66	70	68	71	75	73	70	76	77	76	79
35	70	71	69	68	70	74	73	74	75	77	76	79
40	70	70	69	68	70	73	77	76	73	77	76	81
45	71	70	68	68	71	74	82	75	71	77	76	81
50	70	70	69	68	73	74	70	73	71	77	76	81
55	70	70	69	68	73	75	72	79	71	77	76	86

Auroral Observations.

h.	m.	
A.M.		
1	25	Faint arch (·5) E.S.E. to W.N.W., 20° alt.
1	38	„ disappeared. Bright streak (1) in N., 10° alt.
1	50	Faint light in N.W. (·5), 10° alt.
2	50	Arch (2) from E. to N.W., 2° N. of zenith.
3	0	„ through zenith.
3	20	Bright diffused arch (2) from E.S.E. through zenith to W.N.W.
3	40	Band (1) from S.E. to N.W., 6° S.W. of zenith.
4	0	Curtain of aurora through zenith from N.W. to S.E. (·8), about 10° in extent.
4	15	Aurora disappeared, except a faint arch (·5) from E.S.E. to W.N.W., 20° S. of zenith.
4	20	Arch (·5) drifting towards S., slightly diffused in E.S.E.
4	25	Diffused arch (·5) from E.S.E. to W.N.W., 4° S.W. of zenith.
4	45	„ drifting towards zenith.
4	55	Above arch very faint and through zenith.
5	10	„ brighter towards W.N.W.
5	25	„ bright (1) and 2° S.W. of zenith.
5	35	„ disappeared.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *December* 1, 1882.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
643	607	452	599	561	628	664	639	639	664	649	734
668	589	469	599	580	632	670	643	643	656	647	726
666	586	495	599	591	624	660	647	641	658	647	722
656	570	485	595	597	633	676	641	651	651	649	708
647	559	533	595	633	647	664	660	649	651	645	697
645	550	570	588	626	641	656	660	649	647	643	705
637	514	580	589	626	647	656	658	651	647	649	707
635	499	555	548	624	662	660	651	653	643	656	722
645	495	586	553	632	670	647	654	654	651	672	724
654	474	591	570	633	672	643	662	653	651	722	720
633	472	612	551	641	670	633	664	653	653	773	708
614	510	599	551	641	664	637	651	662	649	749	699

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 19	1 45	2 11	1 54	1 47	1 43	1 29	1 24	1 19	1 26	1 23	1 15
1 18	1 48	2 12	1 51	1 47	1 43	1 27	1 20	1 20	1 27	1 22	1 14
1 24	1 47	2 6	1 48	1 41	1 44	1 22	1 20	1 20	1 26	1 22	1 14
1 28	1 44	2 10	1 52	1 42	1 40	1 24	1 27	1 22	1 24	1 22	1 17
1 28	1 42	2 14	1 50	1 39	1 33	1 27	1 26	1 24	1 26	1 23	1 11
1 29	1 42	2 9	1 50	1 38	1 45	1 22	1 26	1 22	1 26	1 19	1 20
1 32	1 50	1 56	2 3	1 38	1 42	1 24	1 24	1 24	1 23	1 14	1 12
1 36	1 54	1 57	2 2	1 44	1 36	1 23	1 27	1 23	1 24	1 13	1 9
1 36	2 2	1 50	2 1	1 44	1 32	1 24	1 26	1 24	1 22	1 13	1 11
1 30	2 0	1 51	1 58	1 44	1 34	1 28	1 29	1 25	1 23	1 6	1 11
1 39	2 1	1 52	1 57	1 40	1 30	1 38	1 23	1 24	1 22	1 12	1 19
1 40	1 58	1 55	2 2	1 48	1 28	1 31	1 18	1 24	1 22	1 13	1 21

Vertical Intensity.

88	85	off scale	91	85	81	81	79	82	82	83	83
88	89	93	91	84	81	81	81	82	83	83	83
87	86	off scale	88	81	80	83	81	83	83	84	82
87	85	94	94	79	81	82	82	83	88	84	82
86	83	92	94	81	81	81	82	82	83	84	83
86	84	95	91	80	80	81	82	83	83	84	79
86	84	96	97	82	80	81	82	83	83	84	81
87	81	93	off scale	84	81	80	82	83	83	84	82
87	84	93	„	82	81	81	82	82	83	84	82
83	off scale	90	„	82	81	82	82	82	83	85	83
85	93	90	91	82	81	81	81	82	83	82	81
85	off scale	93	91	81	81	81	81	82	83	84	79

Auroral Observations.

h.	m.	
A.M.		
5	45	Faint patch in E.S.E., 5° alt.
6	0	Faint auroral light in S.W., 30° alt.
6	10	„ diffused.
6	20	Irregular arch (1) from S.E. to W., 40° alt.
6	40	Arch (2) from E.S.E. to W., 6° S.W. of zenith.
6	45	Aurora much diffused, drifting through zenith, with much quivering motion, and slightly prismatic.
6	55	Band (1) from E., through Ursa Major, to N.W.
7	5	Band as above, and a diffused light in zenith. Very faint.
7	25	Band less bright, and light disappeared.
7	35	Above band disappeared.
7	40	Faint auroral light from W.N.W. through zenith.
8	25	Faint auroral light in zenith and in N.N.W.
8	35	Patch of aurora (1) in N.N.W., 15° alt.
8	45	Faint arch (·5) from E. to N.W., 10° alt.
8	55	Aurora disappeared. Sky nearly overcast.

December 15, 1882. $\phi = +62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	681	691	691	687	695	687	685	679	691	666	662	647
5	679	695	689	693	689	689	685	681	687	668	656	681
10	679	689	693	683	693	691	678	681	676	666	656	695
15	681	689	697	691	697	687	681	681	683	666	660	693
20	683	687	695	697	699	683	679	679	687	668	668	685
25	685	693	695	695	689	689	679	683	683	670	664	678
30	681	689	699	699	695	687	683	681	681	672	668	683
35	687	691	707	695	687	681	681	683	670	672	672	681
40	687	697	691	691	685	687	683	687	672	676	666	689
45	691	691	695	693	687	683	683	687	662	672	670	697
50	689	691	697	689	693	689	679	693	654	670	678	685
55	683	691	687	699	687	685	681	687	654	668	660	683

Declination. 39° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	1 16	1 17	1 18	1 18	1 18	1 20	1 19	1 20	1 16	1 18	1 19	1 20
5	1 16	1 16	1 18	1 18	1 19	1 19	1 20	1 20	1 16	1 18	1 20	1 17
10	1 17	1 17	1 16	1 19	1 18	1 20	1 22	1 19	1 12	1 19	1 21	1 16
15	1 17	1 17	1 17	1 19	1 19	1 20	1 20	1 20	1 14	1 18	1 20	1 27
20	1 17	1 18	1 17	1 19	1 18	1 20	1 19	1 20	1 15	1 19	1 20	1 20
25	1 17	1 16	1 17	1 18	1 18	1 21	1 19	1 19	1 15	1 18	1 22	1 23
30	1 17	1 17	1 18	1 18	1 18	1 20	1 20	1 19	1 11	1 20	1 21	1 25
35	1 18	1 16	1 18	1 19	1 18	1 20	1 20	1 20	1 12	1 19	1 21	1 24
40	1 18	1 16	1 17	1 20	1 19	1 21	1 20	1 20	1 13	1 19	1 22	1 22
45	1 18	1 17	1 17	1 20	1 19	1 20	1 20	1 19	1 14	1 19	1 21	1 18
50	1 18	1 17	1 18	1 19	1 18	1 19	1 20	1 16	1 16	1 19	1 20	1 22
55	1 18	1 18	1 18	1 18	1 20	1 20	1 20	1 16	1 16	1 18	1 19	1 24

Vertical Intensity. 0·6100 (C.G.S.) +

0	77	75	75	76	75	73	73	73	74	75	75	75
5	76	75	75	76	75	73	74	73	71	75	74	75
10	76	75	75	76	75	74	74	73	72	75	73	75
15	75	74	76	76	75	74	73	73	73	75	73	75
20	76	74	76	75	75	73	73	73	73	73	73	75
25	75	74	75	76	75	74	73	73	73	73	73	74
30	75	74	76	75	75	74	73	73	73	73	73	73
35	75	74	76	75	75	74	73	73	71	73	74	74
40	75	74	76	75	74	74	73	73	74	73	74	73
45	75	74	76	75	74	74	73	73	74	75	74	74
50	75	75	76	75	74	74	73	73	75	76	74	75
55	75	75	76	75	73	73	73	73	75	75	74	74

Auroral Observations.

h.	m.	
A.M.		
5	50	Faint band from N.E. to N.W., about 20° alt.
6	0	,, brighter (1) in N.E.
6	10	Ditto.
6	20	,, disappeared, except in N.E. Faint patches in zenith.
6	30	Aurora very faint. Patches in zenith drifted to 10° alt. N.E.
6	45	,, disappeared except a streak in N.W.
7	0	Bright irregular-shaped arch (1) from E. to N.E., 10° alt. Bright streak (1) in N.W.
7	5	Aurora faint. Above arch, 45° alt. Faint streak in E.S.E.
7	10	Streaks disappeared. Faint arch from E.S.E. through zenith to W.N.W. Arch from E. to N.E. very faint.
7	20	,, disappeared. Arch from E.S.E. to W.N.W. very faint. Faint arch (·2) through Cygnus, Cassiopeia, and Gemini, slightly brighter patch in Leo.
7	40	Arch (·5) through Leo, passing halfway between Ursa Major and N. horizon.
7	50	Aurora very faint.

$\lambda = -115° 43' 50'' = -7h.\ 42m.\ 55s.$ Göttingen Mean Time. *December* 15, 1882.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
685	703	651	685	687	679	666	654	649	666	576	668
679	695	651	693	685	672	654	656	656	658	582	637
672	679	626	683	679	676	670	662	658	662	576	651
672	674	641	691	676	658	666	656	668	645	589	681
662	681	658	685	672	630	668	662	664	649	591	670
674	699	670	693	679	676	664	645	656	633	620	693
672	701	617	689	676	668	662	647	660	637	679	697
666	693	668	687	670	672	660	647	662	620	662	738
668	683	670	687	664	672	660	651	666	628	718	736
666	660	658	687	674	666	660	643	676	612	753	788
664	654	668	691	676	666	666	647	670	603	708	741
701	664	679	689	668	670	654	649	660	578	672	726

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 23	1 18	1 32	1 27	1 28	1 28	1 32	1 23	1 28	1 32	1 13	1 4
1 24	1 20	1 34	1 26	1 28	1 34	1 30	1 29	1 25	1 30	1 11	1 13
1 23	1 29	1 42	1 28	1 29	1 30	1 29	1 23	1 18	1 32	1 6	1 3
1 24	1 28	1 25	1 25	1 31	1 40	1 32	1 33	1 18	1 37	1 0	1 5
1 28	1 26	1 31	1 26	1 31	1 38	1 28	1 20	1 24	1 34	1 0	1 5
1 25	1 25	1 29	1 24	1 28	1 32	1 28	1 17	1 28	1 33	1 4	1 2
1 23	1 22	1 32	1 26	1 29	1 35	1 27	1 24	1 30	1 27	0 53	1 3
1 27	1 24	1 30	1 28	1 29	1 33	1 24	1 22	1 24	1 26	0 56	0 51
1 23	1 22	1 28	1 25	1 21	1 31	1 20	1 30	1 21	1 24	0 56	1 0
1 24	1 33	1 32	1 28	1 29	1 33	1 24	1 27	1 21	1 26	0 48	0 55
1 22	1 31	1 31	1 24	1 30	1 33	1 20	1 24	1 32	1 20	0 58	1 6
1 17	1 29	1 31	1 29	1 34	1 29	1 24	1 30	1 32	1 18	1 6	1 8

Vertical Intensity.

75	75	77	74	73	74	74	71	69	73	71	72
75	76	75	75	73	75	73	71	70	74	70	73
75	76	74	74	73	74	74	72	70	73	73	71
75	75	72	73	73	74	74	71	70	73	71	77
75	75	73	74	73	73	73	71	70	73	74	72
74	75	72	74	72	73	73	71	71	73	73	76
76	74	73	75	73	74	73	70	71	72	75	75
76	73	72	74	73	73	73	70	72	73	76	77
75	74	73	74	72	74	73	69	71	73	73	77
76	75	73	74	73	74	72	69	72	73	75	77
76	74	74	75	74	74	72	69	72	73	77	77
75	78	74	74	74	74	72	69	72	71	72	75

Auroral Observations.

h.	m.	
A.M.		
8	5	Arch (1) from N.E. to N.W., 45° alt., and arch (·5) from S.E. to W., 2° S. of zenith.
8	15	Aurora disappeared, except a faint patch 20° N.W. of zenith, and a brighter patch (·5) in E. and S.E.
8	25	Aurora disappeared.
10	10	Arch (1) from N.W. to E., through zenith.
10	20	„ 5° S.W. of zenith (·5).
10	35	„ irregular in shape, and through zenith (·5 to 1); brightest in N.W.
10	50	„ uniform and (·5).
10	55	Aurora disappeared.
11	10	Faint streak in zenith.
PM.		
1	30	„ in E.N.E., 40° alt.
1	33	„ disappeared.

January 2, 1883. $\Phi = +62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	679	691	662	722	718	703	712	705	697	683	674	674
5	693	681	687	714	712	697	712	699	693	681	677	670
10	691	674	687	722	706	705	712	689	693	687	674	656
15	687	676	689	716	710	712	708	705	689	689	672	643
20	660	666	687	716	710	705	708	705	689	683	674	658
25	697	674	685	718	708	693	703	703	689	677	670	664
30	685	679	682	714	710	703	691	699	681	670	670	660
35	681	677	691	722	706	706	701	701	681	670	677	654
40	681	677	691	705	703	706	701	701	687	677	677	662
45	676	677	689	714	697	710	703	699	681	666	672	666
50	683	672	706	712	701	710	701	701	679	676	676	668
55	691	674	697	714	697	712	708	699	679	677	676	660

Declination. 40° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	0 13	0 14	0 14	0 12	0 12	0 16	0 14	0 16	0 19	0 16	0 14	0 18
5	0 11	0 13	0 13	0 10	0 12	0 15	0 10	0 22	0 20	0 14	0 15	0 18
10	0 12	0 13	0 14	0 14	0 13	0 10	0 14	0 20	0 16	0 13	0 16	0 18
15	0 12	0 12	0 13	0 12	0 14	0 19	0 16	0 17	0 15	0 14	0 16	0 16
20	0 14	0 14	0 14	0 11	0 14	0 18	0 14	0 18	0 15	0 16	0 17	0 18
25	0 12	0 16	0 14	0 10	0 16	0 20	0 14	0 16	0 14	0 16	0 18	0 19
30	0 9	0 16	0 14	0 10	0 14	0 17	0 16	0 17	0 18	0 16	0 18	0 18
35	0 13	0 14	0 14	0 11	0 15	0 16	0 18	0 19	0 16	0 15	0 17	0 20
40	0 9	0 15	0 16	0 10	0 14	0 16	0 16	0 20	0 16	0 16	0 18	0 18
45	0 14	0 15	0 15	0 11	0 18	0 17	0 16	0 12	0 16	0 17	0 18	0 16
50	0 14	0 14	0 15	0 9	0 16	0 17	0 17	0 18	0 16	0 14	0 18	0 18
55	0 14	0 15	0 14	0 12	0 14	0 19	0 17	0 18	0 15	0 15	0 18	0 20

Vertical Intensity. 0·6100 (C.G.S.) +

0	77	79	79	81	79	78	75	79	77	77	76	77
5	78	79	79	79	79	77	76	79	77	77	75	77
10	79	79	79	79	79	76	76	76	77	77	75	77
15	78	79	79	79	78	79	76	76	77	77	75	77
20	79	79	79	76	79	77	76	76	77	77	77	77
25	79	79	78	77	79	77	76	76	77	77	77	76
30	78	79	79	77	77	78	76	76	78	76	77	77
35	79	78	79	76	79	78	77	76	77	75	77	77
40	79	78	80	78	78	78	76	76	77	75	77	76
45	78	78	80	78	78	78	76	76	77	75	77	77
50	79	79	80	79	78	77	77	77	77	76	77	76
55	79	79	80	79	78	76	77	77	77	76	77	76

Auroral Observations.

h.	m.	
A.M.		
1	20	Arch (·5) from E.N.E. to N.N.W., 5° alt. 1.30. Arch disappeared.
1	41	Faint arch (·3) from E. to E.N.E., 5° alt., till 1.50.
1	55	Faint arch from E.N.E. to N.N.W., 8° alt.
2	0	„ irregular in shape and (1). 2.10. Faint arch (·5).
2	30	Arch (·5) from same points, 10° alt.
2	40	„ slightly diffused and irregular in shape.
2	50	„ „ (1) in N.N.W.
3	0	Above arch confused, and from N. to E., 5° alt.
3	15	„ from E.S.E. to N.N.W., 15° alt., and a streak (1) in N.N.W., 8° alt.
3	20	Streak disappeared and arch very irregular.
3	35	Arch (·5) and 10° alt.
3	45	„ (·1). Another arch about 3° below, and a few bright streaks in N.N.W., 15° alt.
4	0	Lower arch disappeared. Upper arch (·5) slightly diffused.
4	20	Arch very faint and uniform, till 45.
5	0	„ 15° alt.
5	25	„ diffused and irregular (0 to 1).
5	30	„ disappeared. Patches (·5) in E.S.E. and N.N.E.
5	37	Faint arch from S.E. to N.W., 60° alt, till 5.45.
5	55	„ diffused and 70° alt.
6	10	„ regular (1 to 2), 45° alt.
6	15	Double arch (·7) from E. to N.W., 12° alt., passing Leo, and just below η Ursæ Majoris.
6	20	Arch now about 8° alt. (0 to 1).
6	31	„ faint in N.W.
6	40	„ (1). And at 6.55.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *January* 2, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
662	610	463	500	624	674	626	622	651	624	677	639
660	591	474	540	637	664	614	620	653	607	687	637
658	582	493	551	676	641	622	628	643	601	697	668
658	567	502	550	701	658	616	630	633	624	685	637
651	559	508	582	693	660	607	626	639	635	676	654
641	561	497	578	689	653	599	633	643	630	695	645
630	517	480	514	701	654	603	641	654	632	643	647
628	519	463	548	693	643	610	653	668	639	674	660
620	519	424	616	681	649	610	643	687	639	620	654
618	514	398	628	668	641	624	645	681	658	641	662
624	463	416	630	649	643	605	653	685	685	643	689
622	474	444	616	672	628	597	658	641	651	641	674

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0 18	0 34	0 46	0 42	0 34	0 27	0 38	0 34	0 19	0 11	0 8	0 17
0 20	0 38	0 46	0 42	0 33	0 30	0 42	0 32	0 14	0 16	0 10	0 15
0 22	0 36	0 42	0 42	0 26	0 32	0 40	0 21	0 13	0 16	0 12	0 19
0 20	0 35	0 41	0 43	0 22	0 32	0 40	0 25	0 13	0 10	0 10	0 16
0 22	0 36	0 35	0 38	0 25	0 34	0 43	0 20	0 19	0 9	0 12	0 13
0 22	0 36	0 36	0 42	0 24	0 30	0 45	0 22	0 14	0 9	0 6	0 20
0 26	0 41	0 44	0 56	0 28	0 30	0 44	0 20	0 12	0 12	0 22	0 18
0 25	0 38	0 55	0 52	0 27	0 18	0 43	0 17	0 10	0 10	0 16	0 18
0 30	0 36	1 0	0 36	0 34	0 31	0 37	0 22	0 7	0 16	0 21	0 14
0 28	0 37	1 12	0 38	0 38	0 36	0 30	0 18	0 8	0 14	0 18	0 11
0 31	0 48	1 8	0 39	0 40	0 38	0 36	0 18	0 10	0 10	0 18	0 12
0 33	0 40	0 56	0 43	0 28	0 38	0 35	0 17	0 11	0 20	0 18	0 6

Vertical Intensity.

76	83	75	69	72	73	74	73	73	75	77	73
76	82	76	70	71	73	74	73	73	74	76	76
76	83	75	72	70	74	74	73	73	75	77	76
76	82	76	72	71	73	73	74	73	74	78	75
77	81	77	70	73	73	72	74	73	75	78	77
78	78	75	69	73	73	74	74	74	75	79	76
80	77	74	77	73	73	73	73	74	75	76	77
81	79	73	73	73	74	73	74	76	75	78	76
82	76	71	69	72	74	72	74	76	74	76	76
82	77	68	67	71	75	71	74	75	75	76	76
83	77	69	71	72	74	73	73	75	75	76	75
84	75	69	71	71	75	72	73	75	76	77	79

Auroral Observations.

h. m.	
A.M.	
7 25	Double arch (·8) from S.E. to N.W., 45° alt. in N.
7 40	Segment of arch (·5) from E. horizon towards N., 8° alt.
7 50	Fainter arch, about 3° above and parallel to the last.
8 25	Arch (1) from E. to N.W., about 45° alt.
8 50	„ fainter (·5).
9 40	Mass of Aurora (1) in N.N.W., alt. 25°, drifting towards W.
9 45	Arch now diffused and irregular (1) from N.N.E. to W.N.W., alt. 60°.
9 55	„ much diffused and striated in N.W., also at 10.5.
10 20	„ very faint. 10.35. Disappeared.
10 50	Arch (1) from E.S.E. through zenith to N.W. 10.55. Very faint.
11 0	„ striated (1) and drifting N.
11 5	„ very faint, except in N.W. extremity, and a patch (·5) on N.N.W. horizon.
11 10	Arch now 5° N. of zenith, (1) in N.W. and striated, about (·5) in other parts.
11 15	„ disappeared. Two patches (1) in N.N.W., 45° alt.
11 20	Patches in N.N.W., very faint. Faint patch on E.S.E. horizon.
11 50	Patch in N.N.W., 45° alt. (1).
12 0	Faint arch from N.N.W. to E., 10° N. of zenith. 12.15. Disappeared.
P.M.	
12 20	Faint mass of aurora on horizon from E. to E.S.E. 12.30. Faint patch only in E., 8° alt.
12 40	Arch (·5) from W.N.W. through zenith to E.S.E. Another arch (·5 to 1), 70° alt., from W.N.W. to about 50° alt. in S.E.
12 50	Both arches very faint.
1 0	„ disappeared. Faint streak in N.N.W., 45° alt.
1 20	Mass of aurora in N.N.W., drifting to N. 45° alt. 1.35. Disappeared.
3 30	Faint band (·3) parallel to horizon from N.N.E. to N.W., 10° alt. 3.40. Disappeared.

January 15, 1883. $\phi = +62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	672	674	689	679	683	689	683	674	670	676	685	668
5	666	677	683	676	687	687	683	672	672	677	685	670
10	672	695	685	679	683	687	681	672	672	681	685	672
15	676	676	677	674	687	685	679	670	670	676	679	662
20	670	681	676	672	689	681	679	668	672	677	674	654
25	676	674	674	676	693	689	676	672	668	679	670	639
30	672	670	677	679	683	695	674	672	664	681	674	641
35	674	670	676	683	677	689	677	662	666	677	674	610
40	674	676	681	679	683	689	676	664	668	679	674	591
45	681	683	677	681	683	685	679	666	668	681	666	591
50	681	687	681	681	679	689	677	668	672	685	672	607
55	681	687	681	683	685	685	677	670	672	683	670	574

Declination. 39° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	1 15	1 14	1 12	1 14	1 16	1 14	1 16	1 16	1 15	1 14	1 12	1 19
5	1 14	1 12	1 14	1 15	1 16	1 15	1 16	1 17	1 16	1 14	1 13	1 19
10	1 13	1 10	1 12	1 16	1 17	1 14	1 16	1 18	1 16	1 14	1 14	1 19
15	1 14	1 10	1 13	1 16	1 15	1 16	1 16	1 19	1 16	1 15	1 14	1 19
20	1 14	1 10	1 14	1 16	1 14	1 14	1 16	1 16	1 14	1 14	1 15	1 20
25	1 14	1 11	1 15	1 16	1 14	1 12	1 18	1 15	1 15	1 12	1 13	1 21
30	1 14	1 10	1 14	1 16	1 14	1 12	1 16	1 14	1 15	1 10	1 10	1 26
35	1 14	1 10	1 14	1 16	1 16	1 16	1 16	1 16	1 16	1 10	1 10	1 27
40	1 13	1 14	1 15	1 16	1 16	1 14	1 16	1 18	1 16	1 12	1 12	1 24
45	1 12	1 13	1 13	1 17	1 16	1 14	1 14	1 18	1 15	1 13	1 14	1 28
50	1 12	1 12	1 14	1 16	1 16	1 16	1 15	1 16	1 15	1 13	1 24	1 30
55	1 13	1 11	1 15	1 16	1 15	1 16	1 15	1 16	1 15	1 13	1 15	1 26

Vertical Intensity. 0·6100 (C.G.S.) +

0	74	74	76	77	77	76	77	77	77	76	76	75
5	74	74	77	77	77	76	77	77	76	76	76	75
10	74	74	77	77	77	77	77	77	76	76	77	76
15	74	75	77	77	77	77	77	76	76	76	76	78
20	74	75	77	77	77	76	77	76	76	76	76	79
25	74	75	77	78	78	77	77	77	76	75	76	79
30	74	75	77	77	77	77	76	77	76	75	76	79
35	74	76	77	77	78	77	76	77	76	75	75	80
40	74	76	77	77	77	76	76	77	76	76	76	79
45	74	76	77	78	77	77	77	77	76	76	75	79
50	74	77	77	77	76	78	77	77	76	76	73	80
55	73	77	77	77	76	78	77	76	76	76	75	81

Auroral Observations.

h.	m.	
A.M.		
10	45	Arch (1) from 60° alt. N.N.W. through zenith to 60° alt. E.S.E. Sky nearly overcast.
10	55	Sky overcast. Aurora disappeared.
11	30	Masses of aurora (·5) in N.N.W., alt. 50°, visible between clouds.
11	40	„ disappeared.

$\lambda = -115^\circ\ 43'\ 50'' = -7\text{h. } 42\text{m. } 55\text{s.}$ Göttingen Mean Time. *January* 15, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
572	454	401	632	645	616	565	695	679	681	653	693
557	452	396	677	647	597	569	679	668	691	653	674
544	439	416	674	654	582	572	662	639	687	630	654
517	422	517	683	654	580	570	672	654	639	639	660
489	437	557	651	653	578	576	676	668	637	639	654
504	427	580	645	653	572	591	660	647	647	633	693
527	409	591	651	641	569	593	649	662	643	658	681
497	396	618	635	639	567	620	666	658	641	635	664
478	427	647	639	626	548	651	691	649	662	666	660
470	422	662	637	612	548	643	703	653	649	676	670
467	411	670	632	605	561	649	677	660	639	687	672
444	396	639	645	607	563	676	672	677	649	685	670

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 31	1 54	2 31	1 44	1 35	1 42	2 1	1 29	1 16	1 7	1 3	1 4
1 38	2 20	2 20	1 19	1 36	1 48	1 51	1 28	1 10	1 5	1 4	1 0
1 39	2 14	2 40	1 24	1 32	1 54	1 48	1 22	1 10	1 12	1 3	1 5
1 44	2 25	2 2	1 54	1 32	2 0	1 49	1 17	1 9	1 7	0 59	1 7
1 52	2 34	1 43	1 31	1 32	2 0	1 46	1 23	1 8	1 5	1 0	1 8
1 40	2 26	1 39	1 30	1 34	1 58	1 43	1 23	1 8	1 6	1 4	0 58
1 42	2 10	1 49	1 28	1 36	2 0	1 42	1 32	1 8	1 6	0 58	0 59
1 49	2 15	1 42	1 32	1 36	1 56	1 34	1 18	1 8	1 5	1 2	1 11
1 47	2 30	1 34	1 37	1 38	1 58	1 34	1 20	1 5	1 11	1 0	1 14
2 0	2 21	1 36	1 26	1 42	1 59	1 36	1 20	1 7	1 4	1 1	1 14
1 54	2 6	1 30	1 42	1 49	1 53	1 31	1 19	1 3	1 6	1 3	1 11
2 10	2 6	1 39	1 39	1 47	2 0	1 34	1 11	1 2	1 1	1 3	1 16

Vertical Intensity.

80	85	85	78	76	76	71	70	74	78	77	79
81	86	88	76	76	77	70	70	73	79	79	77
82	90	86	77	76	74	69	70	72	79	76	77
84	84	82	73	75	75	70	70	74	76	77	76
86	83	82	76	76	74	70	70	75	76	76	76
86	85	79	79	77	74	71	70	74	77	76	79
84	84	76	79	77	73	70	70	75	77	76	79
86	84	76	79	77	74	70	69	75	78	76	77
85	85	77	78	76	73	70	73	74	78	77	77
86	88	77	78	76	72	70	72	76	78	77	77
86	86	79	75	76	71	71	73	76	76	77	77
89	83	79	75	76	71	70	73	77	77	77	77

February 1, 1883. $\phi = +62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	707	726	707	689	681	728	685	681	664	639	666	668
5	724	722	705	695	685	734	683	678	664	658	658	666
10	724	728	708	693	685	722	679	678	654	662	656	664
15	726	722	707	683	683	724	681	681	662	662	660	658
20	724	724	712	687	666	718	683	678	664	664	658	645
25	718	724	710	685	658	714	687	672	666	666	660	620
30	712	716	701	691	670	714	687	668	668	666	664	548
35	722	714	699	683	683	703	689	666	664	664	658	431
40	730	734	687	697	695	701	687	662	658	664	658	478
45	728	728	689	683	699	695	693	666	664	666	666	480
50	728	712	685	674	703	697	685	666	660	668	666	508
55	720	708	687	676	708	697	689	662	658	668	666	529

Declination. 39° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	1 0	1 1	1 11	1 9	1 11	1 6	1 17	1 16	1 16	1 16	1 16	1 18
5	0 58	1 4	1 8	1 10	1 8	1 8	1 16	1 17	1 16	1 16	1 15	1 16
10	0 58	1 0	1 9	1 11	1 8	1 8	1 16	1 16	1 15	1 17	1 15	1 17
15	0 57	1 4	1 9	1 11	1 14	1 8	1 16	1 16	1 16	1 16	1 15	1 22
20	1 0	1 2	1 8	1 10	1 8	1 14	1 15	1 17	1 16	1 16	1 15	1 28
25	1 2	1 4	1 10	1 10	1 6	1 13	1 14	1 18	1 16	1 17	1 15	1 36
30	1 0	1 2	1 11	1 11	1 11	1 14	1 14	1 17	1 17	1 17	1 14	1 50
35	0 57	1 5	1 11	1 12	1 7	1 15	1 14	1 16	1 17	1 16	1 14	2 47
40	0 57	1 6	1 13	1 11	1 7	1 18	1 14	1 16	1 17	1 16	1 14	1 36
45	0 59	1 11	1 11	1 12	1 5	1 17	1 16	1 16	1 16	1 16	1 14	1 32
50	1 0	1 11	1 11	1 12	1 5	1 17	1 15	1 16	1 16	1 16	1 14	1 42
55	1 0	1 12	1 8	1 11	1 4	1 18	1 16	1 16	1 16	1 16	1 15	1 44

Vertical Intensity. 0·6100 (C.G.S.) +

0	77	79	76	77	77	79	75	75	74	76	76	77
5	76	77	76	78	78	78	75	76	74	75	75	77
10	76	77	76	78	78	78	74	76	75	76	76	77
15	77	77	76	78	78	79	74	75	74	75	76	78
20	77	76	76	78	77	79	74	75	74	75	76	79
25	77	77	76	78	77	79	75	75	75	75	76	92
30	78	76	76	78	77	79	75	75	75	76	78	94
35	79	77	77	79	78	79	74	74	75	76	78	73
40	79	78	78	79	79	79	75	74	75	77	79	81
45	79	77	78	79	79	77	75	74	76	77	78	83
50	78	77	78	79	79	77	75	74	76	77	77	82
55	78	77	78	78	78	76	75	74	75	77	77	89

Auroral Observations.

h. m. A.M.	
2 20	Arch (1) from N.N.W. to E.S.E., 15° alt. A few streamers in N.N.W., 8° alt.
2 40	Streamers disappeared except a very faint patch in E.S.E., 5° alt.
2 50	Faint streak (·5) in N.N.W. A few streamers in E.N.E., 25° alt. (1).
2 55	Streamers disappeared. Streak as before. Faint patches in E.N.E. 3.5. Faint arch from N.W. to S.E., 25° alt.
3 25	„ disappeared. Very faint patch in E.N.E., 10° alt.
3 35	Arch (·5 to 1) from E. to N.N.W., 8° alt., brightest in E.; another arch (·5) from N.W. to S.E., 27° alt.
3 45	Arches as above, but of uniform brightness (1).
4 0	Arch from E. to N.N.W. disappeared. Streamers from E. to N.N.W. (1), 20° alt. Arch from S.E. to N.W. as before, till 4.10.
4 45	Two parallel streaks from N.W. towards S.E. (·7), 30° alt.
4 55	Streaks now from W.N.W. pointing to zenith. Faint light (·2) from S.E. towards zenith, 50° alt,
5 10	Faint diffused arch (·8) from S.E. through zenith to N.W.
5 50	Faint segment of arch (·3 to ·7) from E.S.E. through zenith to N.N.W., diffused and brightest in N.N.W. A few streamers (·3) in N.N.W. 6.0. The same.
6 10	Streamers disappeared. Arch very faint in N.N.W., and (·5) in E.S.E.
6 20	„ disappeared. Arch from E.S.E. to N.N.E., 60° alt., (1) in E.S.E. to 40° alt., rest faint.
6 30	Above arch (·3 to ·7) from E.S.E. to N.N.W., 70° alt. Faint streak in W.N.W., 30° alt.
6 40	„ disappeared. Arch (·7) from S.E. through Leo and Cassiopeia to N.W. 7.0. Arch very faint.
7 10	„ disappeared from zenith to N.W. 7.25. Through zenith to 30° alt. in N.W. 7.40. Disappeared. Faint streak through zenith.
7 45	Faint arch (·2) from S.E. to W.N.W., 7° S. of zenith till 8h.
8 10	Faint streamer (·3) in E., from 5° to 25° alt.
8 35	Faint patch in N.W., 45° alt., and faint light from S.E. extending to Procyon. 8.45. The same.
9 0	Patch of aurora as above. Irregular arch (1) from N.N.W. to E.S.E., 80° alt.
9 10	„ and a few detached streamers (1·5) in N., 45° alt.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *February* 1, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
555	637	670	683	626	643	508	361	487	572	455	637
555	626	689	683	637	624	472	300	504	572	435	691
576	628	708	672	660	645	459	207	538	599	388	697
599	637	724	658	666	620	399	−13	584	601	440	722
616	649	738	666	668	609	412	067	649	630	385	724
630	660	712	674	662	588	450	149	672	653	294	707
616	666	707	672	674	574	377	300	637	609	497	741
607	679	693	662	676	559	294	303	584	584	632	763
628	672	712	651	668	553	229	366	589	519	601	828
610	683	707	633	662	536	254	373	591	521	610	814
612	674	674	622	647	531	320	424	588	514	591	845
632	668	672	624	658	544	409	476	570	418	624	835

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 35	1 37	1 22	1 20	1 33	1 36	2 18	2 27	1 30	1 38	2 7	1 3
1 46	1 39	1 13	1 17	1 36	1 42	2 22	2 42	1 40	1 36	2 7	0 46
1 35	1 34	1 10	1 26	1 32	1 40	2 28	2 19	1 37	1 42	1 48	0 59
1 32	1 36	1 9	1 24	1 25	1 39	2 40	3 8	1 26	1 37	1 31	1 3
1 29	1 34	1 6	1 20	1 27	1 48	2 31	2 50	1 32	1 49	2 5	0 52
1 28	1 30	1 6	1 20	1 30	1 48	2 35	2 52	1 52	1 50	2 26	0 48
1 30	1 26	1 8	1 22	1 26	2 1	3 6	1 54	1 30	1 54	1 40	1 2
1 31	1 22	1 15	1 22	1 26	2 6	3 14	2 11	1 20	2 2	1 8	0 59
1 26	1 22	1 9	1 23	1 28	2 14	3 19	1 51	1 28	2 14	1 20	0 56
1 33	1 18	1 14	1 36	1 24	2 8	3 15	1 53	1 42	2 0	1 15	0 36
1 35	1 22	1 21	1 33	1 34	2 10	3 1	1 52	1 49	1 52	1 39	0 32
1 27	1 23	1 22	1 35	1 30	2 4	2 44	1 48	1 49	2 22	1 31	0 39

Vertical Intensity.

88	79	76	76	73	76	68	101	80	68	67	73
82	81	76	75	74	75	68	103	82	70	64	72
83	81	75	73	75	75	66	103	80	72	63	72
90	81	75	74	75	75	72	83	79	69	68	71
89	80	75	75	75	71	70	68	73	75	50	77
89	78	76	75	75	71	81	58	69	77	44	73
87	76	75	74	74	70	79	67	68	76	64	73
86	76	75	74	75	69	84	80	68	73	68	73
84	75	77	75	75	69	87	70	71	73	62	75
82	75	77	74	76	69	84	75	73	75	56	77
84	77	75	75	76	67	109	77	70	69	56	66
82	76	76	75	76	67	110	81	70	62	68	74

Auroral Observations.

h.	m.	
A.M.		
9	25	Arch (·8) now uniform and from N.N.W. to S.E., 80° alt.
9	45	„ disappeared. Faint aurora in N.W. and S.E.
10	20	Arch (·5 to 1) from S.E. to N.W., 40° alt., brightest in S.E.
10	30	Arch (·5) from S.E. to W.N.W., 20° alt., and another faint arch just below from the same points.
10	45	Above arches both very faint. 11.0. Upper arch (1·5) and striated, lower one as before.
11	20	Curtain-shaped arch (2) from S.E. to N.W., slightly prismatic, pulsating, and drifting towards zenith, 45° alt. in S.
11	30	„ extending N.W. and S.E. through zenith; slightly prismatic (2).
11	35	Above arch now from S.E. to N.W. through zenith, and 15° wide in zenith (1 to 2).
11	45	Sky nearly covered with faint aurora.
11	50	Arch (·7) from S.E. to W.N.W., 45° alt. in S., and a curtain-shaped light (1), slightly prismatic, in N.N.W., moving towards W.
P.M.		
12	10	Irregular arch (·5 to 1·5) from N.N.W. through zenith to S.E., brightest in N.N.W.
12	15	Bright streak in N.N.W., alt. 15° (1), drifting towards W. Another streak (·5) in E.S.E., 15° alt.
12	20	Irregular arch (1) from N.N.W. through zenith to 5° alt. in E.; in zenith and in N.N.W. brighter (1·5). Also at 12.30.
12	40	Aurora disappeared except a bright patch in N.N.W., 10° alt.
12	55	Diffused arch (1) from N N.W. through zenith to E.S.E., striated.
1	5	„ disappeared. Faint streak in E.S.E., 5° alt., and a few faint streamers in N.N.W., 5° alt.
1	25	Bright patch (1) in N.N.W., 10° alt. Faint band (·5) from W.N.W. to S.S.W., 20° alt. till 1.35.
1	50	Faint arch (·3) from W.S.W. to S.S.E., 30° alt.
2	5	Arch diffused (·5) 45° alt. Faint diffused lights in E. and E.S.E., 5° alt.
2	15	Lights disappeared. Arch (·3) from W.N.W., 75° alt.
2	25	„ Faint streak in N.N.W., 20° alt. Streamers (·8) in E.N.E., 3° alt.

February 15, 1883. $\Phi = +\ 62^{\circ}\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	689	685	693	708	718	681	678	670	645	662	622	670
5	681	697	705	716	710	683	672	670	643	666	653	664
10	678	705	710	736	701	668	678	670	651	668	649	660
15	668	703	724	738	693	685	668	674	653	666	654	664
20	681	708	716	734	689	687	670	676	654	666	656	658
25	676	693	710	738	699	683	674	676	588	670	658	649
30	691	701	705	741	701	681	674	670	567	672	666	643
35	697	689	691	740	703	679	678	666	570	676	670	645
40	670	691	712	720	699	674	676	656	605	676	666	647
45	678	689	705	720	687	670	674	660	626	668	668	635
50	679	699	712	716	687	672	668	653	632	670	672	612
55	666	695	740	716	683	670	668	637	658	645	670	622

Declination. 39°+

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	1 7	1 13	1 15	1 8	1 13	1 15	1 16	1 15	1 11	1 13	1 24	1 18
5	1 9	1 10	1 12	1 4	1 14	1 16	1 17	1 15	1 11	1 15	1 18	1 18
10	1 9	1 9	1 10	1 1	1 16	1 15	1 15	1 14	1 12	1 14	1 19	1 19
15	1 8	1 11	1 10	0 59	1 18	1 14	1 18	1 13	1 10	1 16	1 18	1 18
20	1 7	1 9	1 10	1 3	1 16	1 14	1 18	1 12	1 11	1 18	1 18	1 20
25	1 6	1 13	1 13	1 6	1 14	1 14	1 18	1 12	1 40	1 18	1 17	1 23
30	1 5	1 14	1 14	1 4	1 15	1 15	1 18	1 11	1 40	1 18	1 16	1 26
35	1 7	1 18	1 12	1 6	1 13	1 16	1 17	1 12	1 9	1 18	1 14	1 28
40	1 11	1 18	1 8	1 5	1 17	1 17	1 16	1 12	1 8	1 18	1 16	1 29
45	1 12	1 18	1 9	1 5	1 15	1 16	1 16	1 12	1 13	1 19	1 14	1 26
50	1 12	1 15	1 8	1 9	1 17	1 16	1 16	1 12	1 15	1 18	1 16	1 31
55	1 18	1 16	1 8	1 11	1 15	1 16	1 15	1 12	1 13	1 19	1 17	1 35

Vertical Intensity. 0·6100 (C.G.S.) +

0	67	67	67	67	65	66	67	68	67	68	72	70
5	66	68	67	67	66	66	67	67	67	69	72	70
10	66	67	67	66	66	66	67	67	66	70	71	69
15	67	67	67	65	66	66	67	67	66	70	70	69
20	68	67	68	65	66	67	67	67	66	69	70	70
25	67	67	68	62	67	67	67	67	68	70	70	69
30	66	67	67	62	64	68	67	67	58	70	70	70
35	64	67	66	60	66	67	67	66	69	69	70	72
40	67	68	68	59	66	67	67	67	71	70	70	73
45	66	67	68	61	67	68	67	67	73	69	70	73
50	68	68	68	62	66	68	67	66	72	68	69	74
55	67	67	67	63	66	68	68	67	68	73	70	74

Auroral Observations.

h.	m.	
A.M.		
3	25	Faint arch from N.N.W. through Ursa Major to E.S.E., and a few streaks (·5) in N.N.W., 8° alt.
3	35	Arch as above. Another arch from same points through the tail star of Ursa Major, and a streak (·5) from N.N.W. horizon to zenith.
3	45	Both arches as above. Streak disappeared.
4	0	One faint diffused arch (·5) passing through Leo and Ursa Major to N.W.
4	15	,, Streak from Cassiopeia adjoining the arch in N.W.
4	25	Arch (·5) striated from N.N.W., just above Ursa Major to E.S.E, and several streamers (·5) in N.
4	35	Arch (·5) from N.N.W. to E.S.E., 15° alt., streamers (1) as above.
4	50	Segment of arch (·7) in E.S.E., 5° alt. Faint streak (·3) in N.N.E., 40° alt.
5	0	Streak disappeared. Faint arch (·3) from E.S.E. to N., 45° alt., till 5.10.
5	45	Faint streak in N.N.W., 45° alt., till 5.55.
7	50	Masses of aurora (·5) from E.S.E. to S.E., 25° alt., till 8.0.
8	20	Bright masses of aurora (1) from 20° alt. in S.E. to zenith. Faint streak in N.N.W. from horizon to 50° alt.
8	25	The whole zenith covered with aurora, striated, and quivering (1·5).
8	30	,, faint (·5).
8	35	,, disappeared except a very faint patch in zenith. Faint streak (·3) in N.N.W to 30° alt.
8	40	Faint curtain-shaped aurora (·7) from E.S.E. to zenith.
8	50	Diffused arch (1) from E.S.E. to W., 50° alt.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *February* 15, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
630	654	668	679	683	670	672	668	662	664	664	664
626	656	672	674	683	674	670	666	660	660	658	662
622	668	670	678	683	674	672	666	660	656	664	664
609	666	672	679	679	676	670	662	660	656	662	666
612	664	666	678	676	674	672	664	666	658	662	695
616	660	681	670	678	672	672	662	664	664	662	681
620	666	678	676	678	658	670	664	662	662	666	693
622	666	678	681	676	658	662	666	668	660	664	710
626	666	681	679	674	651	662	664	664	662	662	703
628	672	678	685	676	649	664	662	660	662	660	699
641	664	666	685	676	662	662	664	666	660	662	703
649	666	674	685	670	668	668	662	668	656	664	707

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 22	1 22	1 18	1 17	1 16	1 20	1 17	1 20	1 20	1 14	1 11	1 12
1 22	1 22	1 19	1 20	1 17	1 20	1 20	1 21	1 20	1 16	1 15	1 13
1 27	1 19	1 23	1 18	1 18	1 20	1 19	1 19	1 20	1 16	1 14	1 15
1 28	1 20	1 16	1 16	1 19	1 20	1 19	1 22	1 16	1 13	1 14	1 18
1 28	1 21	1 20	1 16	1 20	1 22	1 22	1 19	1 16	1 15	1 14	1 4
1 23	1 26	1 17	1 18	1 19	1 18	1 20	1 20	1 16	1 17	1 14	1 8
1 24	1 20	1 16	1 18	1 18	1 24	1 19	1 20	1 21	1 16	1 13	1 3
1 23	1 19	1 17	1 16	1 18	1 25	1 18	1 18	1 20	1 16	1 14	1 0
1 26	1 20	1 16	1 18	1 21	1 22	1 20	1 22	1 19	1 15	1 14	1 1
1 25	1 20	1 17	1 18	1 20	1 28	1 22	1 23	1 22	1 14	1 14	1 0
1 25	1 20	1 20	1 18	1 19	1 22	1 22	1 21	1 17	1 12	1 14	1 3
1 24	1 21	1 18	1 17	1 18	1 18	1 20	1 20	1 12	1 15	1 12	1 1

Vertical Intensity.

71	66	69	69	70	70	70	70	69	70	70	67
70	66	69	69	70	70	70	69	69	70	69	67
70	67	68	69	70	70	70	69	69	69	68	68
68	67	69	69	71	71	70	69	69	70	68	68
69	67	69	69	70	70	70	69	69	70	68	69
68	67	68	70	71	71	70	69	67	70	68	69
64	67	68	69	70	70	70	69	67	69	69	69
66	68	69	69	70	70	69	69	68	69	67	70
66	67	69	71	70	71	70	70	69	69	69	69
67	68	69	72	70	71	70	69	69	68	69	69
66	68	68	72	70	70	69	69	68	69	67	68
67	69	70	72	70	70	69	69	69	69	67	68

Auroral Observations.

h. m.	
A.M.	
9 0	Diffused arch very faint and from S.E. to Moon.
9 10	,, disappeared.
9 20	A few bright streamers (1) in N.N.W., and a parallel streak (1) in S.W., 45° alt., the whole disappearing immediately afterwards.
9 50	Aurora (1) from 20° alt. in S.E. to Moon, through Leo.
10 0	Bright diffused and irregular arch (·5 to 2), with prismatic streamers in E.S.E., from E.S.E. to W.N.W., brightest in E.S.E.
10 6	,, disappeared, except a very faint streak in E.S.E., 20° alt.
10 10	Streak disappeared.
11 45	Diffused lights (1) in zenith and to 10° alt. in N.W. Bright streak (1) in W.N.W. parallel to horizon, 25° alt.
11 50	Streak disappeared. Bright diffused arch (1) with streamers, from E.S.E. through zenith to 20° alt. in N.N.W., drifting towards N.
11 55	Arch disappeared, except faint streaks (·5) on E.S.E. and N.W. horizons.
P.M.	
12 5	Arch (·7) from 30° alt. in E.S.E. to W.N.W. through zenith, slightly diffused in W.N.W.
12 10	,, disappeared. Faint diffused lights from N.N.W. to N.N.E., 45° alt.
12 15	Above disappeared. Faint arch (·5) from E.S.E. through zenith to N.N.W. till 12.45.
1 50	Patch in W.N.W. (1), 16° to 25° alt.
2 0	Several streamers (·5) from N.N.W. to N., 30° alt., till 2.15.

March 1, 1883. ϕ = +62° 38′ 52″.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	753	728	771	765	824	676	586	504	557	431	495	565
5	769	736	749	798	788	632	597	484	555	326	521	565
10	753	691	728	830	832	639	609	472	553	302	525	570
15	755	710	720	804	812	695	620	461	533	386	484	589
20	714	726	732	804	820	666	502	493	614	427	457	603
25	724	773	786	779	804	689	461	467	599	331	439	607
30	730	781	822	804	759	666	681	416	493	444	459	582
35	720	786	816	806	722	653	710	435	122	338	396	572
40	718	784	824	818	701	666	812	491	267	422	500	557
45	736	786	781	775	741	658	769	538	203	470	469	559
50	736	792	757	736	714	666	786	519	318	429	519	519
55	740	790	757	781	732	626	624	531	373	485	551	517

Declination. 38° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	2 2	2 3	2 12	2 20	2 1	2 14	2 22	2 51	1 51	2 0	1 16	2 11
5	2 3	2 4	2 10	2 18	2 2	2 16	2 13	2 56	1 44	2 6	0 51	2 24
10	1 58	2 12	2 12	2 18	1 58	2 20	2 10	2 47	1 32	2 22	0 56	2 29
15	1 53	2 9	2 10	2 16	2 1	2 17	2 10	2 46	1 42	2 34	1 34	2 20
20	2 8	2 10	2 9	2 8	2 3	2 16	1 51	2 36	1 55	2 49	2 5	2 16
25	2 10	1 57	2 2	2 30	2 4	2 22	1 15	2 35	1 58	3 54	2 16	2 26
30	1 50	1 57	2 8	2 32	2 1	2 23	1 39	3 22	2 26	3 45	1 53	2 21
35	1 56	1 58	2 14	2 41	2 4	2 22	0 44	2 32	2 30	3 14	2 41	2 24
40	2 8	1 56	2 18	2 35	1 58	2 23	1 16	2 10	1 5	2 38	2 0	2 36
45	2 6	2 3	2 20	2 36	1 55	2 22	1 22	1 58	1 58	1 28	1 53	2 30
50	2 4	2 3	2 19	2 22	2 1	2 22	1 56	2 4	2 45	1 30	1 45	2 40
55	2 2	2 9	2 18	2 16	2 6	2 20	2 44	1 54	2 43	1 29	1 41	2 32

Vertical Intensity. 0·6100 (C.G.S.) +

0	71	71	67	67	58	64	69	63	65	53	90	84
5	70	71	68	62	61	64	71	67	68	42	91	88
10	71	71	69	59	60	64	74	72	71	44	85	91
15	70	73	70	56	58	63	76	79	75	38	76	90
20	69	73	70	57	60	64	83	81	74	44	80	89
25	70	70	71	63	60	62	63	74	77	58	75	88
30	68	70	67	58	58	62	63	75	85	52	71	94
35	70	68	66	55	58	62	74	61	53	80	79	95
40	72	68	68	57	56	61	57	64	76	83	84	99
45	72	68	68	56	60	63	45	65	75	83	84	100
50	73	70	68	54	60	63	43	64	74	80	85	104
55	73	68	68	60	63	67	47	67	75	83	87	106

Auroral Observations.

h. m.	
A.M.	
3 10	Band (1) from E. through Ursa Major to N.W. 3.20. Also one on either side of Ursa Major.
3 25	Bright arch (2) with streamers from W.N.W. through zenith to E.S.E., slightly prismatic, in rapid motion drifting N.E. Bright diffused masses (1·5) on horizon from E. to E.S.E.
3 30	Arch now less bright (1) in zenith, diffused in W.N.W., and striated in E.S.E. Aurora on E. horizon now (·5).
3 36	„ irregular, of uniform brightness (2) and 15° wide in zenith. Another lower arch (1) from E.S.E. to E.N.E., 5° alt.
3 40	Upper arch dividing in zenith and drifting N. and S. Lower arch as before.
3 50	Lower arch blended with upper one, alt. 50°, and extending to zenith; streamers of a greenish hue at the extremities of both arches. Lower arch serpentine in shape in E.S.E.
3 55	Arches divided. Upper one faint (·5). Lower one 30° alt. upper edge (·5) lower (2). Another arch (1) from E. to E.N.E., 3° alt.
4 0	Upper arch disappeared except a faint patch in W.N.W., 20° alt. Centre arch (1·5) slightly prismatic, 40° alt. Lower arch very faint (·3).
4 5	Centre arch less bright, except in W.N.W., where (2) and striated. Lower arch as before.
4 10	Centre arch only remains, and is diffused (1), 60° alt.
4 15	„ through zenith (1), and regular except in E.S.E.
4 20	„ 70° alt. and (·7) except in W.N.W., where (1). Faint patch (·5) in N.W., 10° alt. Faint streak (·5) in zenith.
4 35	Above arch (1·5) from S.E. through Leo and zenith to N.W., till 4.50.
5 0	Arch through Ursa Major, Leo, and Procyon; streamers on N. edge. 5.10. Arch through Orion and Pleiades (1).
5 20	Arch striated and diffused. 5.30. Two more arches (2) from S.E. extending to Leo.
5 45	Arch (1) as before through Orion and Pleiades, and a diffused mass of light in S.E. adjoining the arch and extending to 30° alt.
5 55	Another arch (·5) from S.E. through zenith to about 20° alt. in N.W., and diffused masses of light either side of arches in S.E.
6 10	„ disappeared, except the arch through Orion which is slightly prismatic, and making volute motions in N.W. Streamers (1·5) on the arch 45° alt.
6 20	„ disappeared. Band from S.E. through zenith prismatic, and pulsating with great rapidity.
6 25	Three bands, one through, and one on either side of zenith, with winding streaks between the bands as well as streamers, the whole (2) prismatic, and moving and pulsating in all directions.
6 35	Irregular arch (1) from E. to N.W., 30° alt. and prismatic, also patches and streamers from S.E. to W., 45° alt. in S.
6 45	Above arch (·5). Another arch (2) from N.N.E. to W.N.W., prismatic and pulsating. Pyramids of light on N. horizon.
6 55	Latter arch through zenith and just passing the Pleiades to W.
7 0	„ disappeared, except a band (1) from N.N.E. curving along the horizon to S.E. through Leo and Pleiades to W.N.W. (1).
7 15	Above band (1·5) and diffused, through Leo, Procyon, and Pleiades to W.N.W.
7 30	Diffused masses of light (1·5) from N., E., and S.E., passing S. of zenith to W.N.W., about 20° wide.
7 50	„ and band (1) from N.E. to N.W., 40° alt. 7.55. Band disappeared.

$\lambda = -115° 43' 50'' = -7h. 42m. 55s.$ Göttingen Mean Time. *March* 1, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
514	112	203	422	433	326	595	561	551	593	828	855
470	069	276	529	500	209	572	551	521	607	771	763
422	110	390	550	422	232	561	517	529	595	724	740
463	169	403	601	412	442	599	476	572	597	674	761
472	164	392	570	327	485	565	504	643	630	695	788
478	180	361	567	322	485	548	454	603	681	732	804
540	298	409	495	327	489	514	482	708	656	763	796
480	278	386	444	245	550	544	454	654	697	705	761
484	260	357	442	202	559	506	497	641	716	728	869
351	202	274	495	278	551	533	480	658	714	707	832
236	140	388	461	238	550	544	478	697	714	761	802
153	189	348	442	333	516	546	572	637	759	877	794

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 36	3 33	4 55	3 42	3 52	4 46	2 54	2 55	2 32	2 11	1 54	2 19
2 34	4 18	4 52	2 47	3 30	4 10	3 1	2 53	2 30	1 56	2 16	2 23
3 34	4 25	3 40	2 45	4	3 29	3 8	3 9	2 34	2 3	2 16	2 19
4 5	4 5	2 44	2 44	4 6	2 50	2 52	3 6	2 22	1 59	2 18	2 9
3 28	4 6	2 54	2 56	3 28	3 12	3 11	2 50	2 22	2 10	2 16	2 1
3 19	4 30	2 54	3 10	4 54	3 28	3 8	3 12	2 24	2 7	2 9	2 0
3 3	5 38	2 55	3 21	4 34	3 12	3 17	3 17	2 20	1 57	2 10	2 13
2 52	6 1	3 1	3 26	4 14	3 3	3 6	3 13	2 15	1 53	2 11	2 17
2 57	4 7	3 34	3 48	3 24	3 16	3 11	3 19	2 12	1 59	2 12	2 16
2 33	4 28	3 58	3 48	4 15	3 10	3 0	2 50	2 0	2 7	2 16	2 9
2 58	5 10	3 58	4 18	4 0	3 3	2 51	2 48	2 8	2 5	2 1	2 16
3 36	4 58	4 17	3 58	4 32	2 53	2 55	2 40	2 11	1 51	2 4	2 6

Vertical Intensity.

108	107	125	110	109	75	70	71	70	65	73	74
106	108	130	109	108	81	73	73	74	66	74	71
97	108	129	110	113	74	66	75	73	67	73	74
105	126	123	111	110	79	70	70	64	70	75	71
101	113	119	111	109	61	68	71	66	74	77	74
111	101	120	109	102	73	68	67	66	71	79	73
104	103	116	109	111	73	68	66	67	73	78	76
111	132	110	96	104	65	71	67	69	72	76	75
116	124	111	96	104	69	72	68	69	69	76	78
122	113	106	97	109	73	73	62	73	77	77	73
122	123	108	109	78	79	72	63	70	77	80	71
105	116	109	109	95	81	70	67	70	74	75	75

Auroral Observations.

h.	m.	
A.M.		
8	20	Aurora band (2) prismatic, and moving with great rapidity in circular motions.
8	30	Irregular arch (2), striated and slightly prismatic from E.S.E. through zenith to N.W., about 10° wide; N. side of arch pulsating from E. to N., and S. sido from N. towards S.
8	55	Irregular arch (1·5) from E.S.E. to W., appearing like confused masses in E.S.E., and forked in W., from 50° alt. in S. to zenith. A few faint streamers (·7) from E.S.E. to E.N.E., 10° alt.
9	5	Streamers disappeared. Arch (·5). A lower arch from E. to N.N.W., 20° alt. with bright, prismatic, streamers (2) in rapid motion and pulsating.
9	15	Arches faint (·5) and in confused masses, the sky from E.S.E. to W.N.W. and zenith more or less covered with aurora from 10° alt. in N.E.
9	25	„ drifting towards S. and like small cumulus clouds in N.E.
9	35	Above disappeared. Arch (·5) from S.E. to S.W., 30° alt. A few faint streamers (·5) from N.N.W. to N.E., from 15° to 30° alt.
9	45	Above arch very faint, 10° alt. Streamers as before. Faint masses in zenith.
10	0	„ disappeared. Arch (·5) from E.S.E. to W.S.W., 10° alt. in S. Band (·7) with streamers from same points, 5° alt. in N.
10	15	Aurora (·7) from E.S.E. to zenith, and extending in a circle to E.S.E. and thence in a bright horizontal line (1) to N.E. Patch (·5) in S. 10° alt.
10	30	Faint masses of aurora (·5) on horizon and to 5° alt. all round except in W.S.W.
10	40	Faint aurora (·5) from S.W. to S.E., 8° alt. Bank of aurora (1) in rapid motion from N.W. to E.S.E., from 3° to 9° alt.
10	50	Bank disappeared, a few patches (·5) on N. horizon. Aurora from S.W. to S.E. as before.
11	10	Very faint patch on N. horizon. Aurora as above.
11	20	Irregular aurora (1) from N. to N.N.W., 8° alt. Aurora from S.E. to S.W. as before, but fainter (·2), and 5° alt., till 11.35.
11	55	Faint arch (·3) from N.N.E. through zenith to 10° S.W. of zenith.
P.M.		
12	5	Irregular aurora (1) from S.W. to zenith, and a few patches (·5) on N. of zenith.
12	15	Irregular diffused aurora (1) from W.S.W. to S.E., 30° alt.
12	20	Irregular aurora (1) from W. through zenith to E.S.E., striated and pulsating in all directions, about 10° either side of zenith.
12	35	Irregular arch (1·5) from 40° alt. E.S.E. through zenith to W., drifting S. Patch (1) on N.N.W. horizon. 12.50. Disappeared. Faint masses (·3) in N.N.W. and N.W., 50° alt.
1	5	„ disappeared. Bright irregular aurora (1·5) from E.S.E. to E.N.E., 60° alt., till 1.15.
1	25	Faint patch (·3) in N.N.W., 15° alt.
1	30	Faint irregular arch (·5) from E. to S.W., 80° alt. in S.E.
1	40	„ disappeared, except a faint patch (·6) in S., 25° alt., till 1.50.
2	10	Faint streamers (·5) in N.N.E., 30° alt., till 2.15.

March 15, 1883. $\varphi = +62° 38' 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	670	676	672	679	712	695	687	641	614	633	618	662
5	670	674	670	691	712	695	697	645	557	681	610	651
10	662	670	674	693	714	707	687	639	553	714	649	656
15	666	681	681	693	718	699	674	643	465	712	658	654
20	672	679	676	697	724	691	670	662	586	666	662	651
25	666	681	674	701	726	693	674	662	610	620	660	654
30	668	679	676	708	722	687	674	654	654	614	660	660
35	666	672	683	707	724	685	670	651	480	591	678	647
40	672	676	687	712	724	695	668	666	500	607	689	647
45	676	674	683	722	722	695	668	654	512	614	678	651
50	672	676	678	718	714	687	670	643	578	605	676	649
55	674	676	679	718	703	697	660	630	584	599	685	641

Declination. 39° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	1 12	1 12	1 13	1 12	1 10	1 14	1 13	1 19	1 18	1 6	1 18	1 22
5	1 15	1 12	1 13	1 12	1 13	1 13	1 16	1 22	1 26	1 16	1 25	1 25
10	1 14	1 11	1 14	1 11	1 14	1 16	1 16	1 26	1 36	0 55	1 18	1 22
15	1 12	1 10	1 14	1 13	1 13	1 15	1 17	1 31	2 4	0 35	1 22	1 24
20	1 13	1 11	1 13	1 11	1 10	1 14	1 18	1 34	1 29	0 59	1 22	1 23
25	1 11	1 10	1 13	1 10	1 10	1 16	1 16	1 30	1 21	0 52	1 19	1 22
30	1 12	1 11	1 13	1 8	1 11	1 14	1 16	1 31	1 22	0 48	1 20	1 22
35	1 11	1 13	1 12	1 7	1 12	1 14	1 15	1 26	1 39	1 6	1 18	1 22
40	1 11	1 13	1 12	1 5	1 14	1 12	1 14	1 23	1 50	1 7	1 16	1 23
45	1 12	1 12	1 12	1 4	1 12	1 13	1 14	1 16	1 16	1 13	1 19	1 25
50	1 12	1 12	1 12	1 6	1 12	1 13	1 17	1 19	0 46	1 19	1 23	1 24
55	1 10	1 12	1 13	1 8	1 13	1 13	1 18	1 20	0 57	1 22	1 20	1 26

Vertical Intensity. 0·6100 (C.G.S.) +

0	76	76	76	76	77	75	73	74	80	82	81	81
5	76	76	75	77	76	75	73	75	85	80	84	81
10	76	75	75	76	76	73	71	75	90	73	82	82
15	76	76	75	77	75	73	73	74	93	74	82	83
20	77	77	75	77	74	71	72	73	88	75	81	82
25	76	76	75	77	74	73	71	74	86	71	82	82
30	76	76	75	77	74	73	71	74	82	74	82	81
35	76	75	75	77	74	73	71	73	77	81	81	82
40	76	75	76	77	74	73	71	73	85	83	79	82
45	76	75	77	77	74	74	73	74	83	83	77	82
50	76	75	77	77	74	74	73	74	87	84	78	82
55	76	76	76	77	74	74	73	75	90	83	78	83

Auroral Observations.

h.	m. A.M.	
4	20	Arch from E.S.E. to N., 35° alt., very faint except in E.S.E. where (·7), till 4·30.
4	40	„ disappeared, except a very faint patch in E.S.E. 4.55. The same.
5	0	Faint streamers (·3) in N.N.W. to 50° alt., faint patch on E.S.E. horizon.
5	5	Arch (·5) with streamers in N.N.W. from N.N.W. to E.S.E., 30° alt.
5	10	Arch very faint except at extremities, alt. 25°. 5.20. Uniform (·7), 50° alt.
5	25	„ through zenith (1) and diffused in N.N.W.
5	35	„ irregular and from E.S.E. through zenith to N.W., where striated. 5.40. Diffused and (·5).
5	45	„ very faint in zenith. 5.50. The same. 5.55. Arch drifting towards S. and (1).
6	0	Above arch faint (·5), diffused and through zenith. Also at 6.5.
6	10	„ (1) in E.S.E. and irregular to 15° alt. 6.15. The arch very faint (·3) and alt. 80° in S.
6	20	„ from E.S.E. to W. (1·5) with streamers, 50° alt. in S. 6.30. Through Leo just passing Pleiades (1·5).
6	35	„ through zenith. 6.40 and 6.45 (1).
6	50	„ through Leo and just passing the Moon (1).
6	55	„ from E. through zenith, diffused in E. and streamers (1).
7	0	„ 45° alt in N.W. 7.5. With masses of light (2) in E.N.E. horizon.
7	10	„ from S.E. through Leo and the Moon, and diffused masses (1·5) like cumulus clouds.
7	15	Double arch from E.S.E., one through Ursa Major and one through the Moon and Pleiades (2); also pyramid-shaped aurora in E.N.E. to 30° alt. Also at 7 20.
7	30	Above aurora like a semicircle from N.E. through zenith to N.W. (2). 7.35. Arch fainter (1).
7	40	Irregular windings from N.E. towards S.E. and through zenith to 45° alt. in N.W. (1·5).
7	45	„ diffuse and (1). 7.50. The same.
7	55	Diffused auroral light from 50° alt. through zenith and the Moon to N.W. (1).
8	0	Irregular arch (2) from S.E. through Spica and Leo to W.N.W.
8	5	„ pulsating and curtain-shaped in S.E. (1).
8	10	Arch (1·5) from S.E. through Leo and Ursa Major to N.W., slightly prismatic, and diffused in S.E.
8	15	Arch, from E.N.E. through Arcturus and zenith to N.W., slightly prismatic (1·5), and in rapid motion.
8	20	„ motionless and (1).
8	25	Broad arch (1·5) from E. to N.W., 80° alt.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *March* 15, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
654	643	660	691	685	681	679	672	658	664	664	658
653	645	668	689	685	678	681	678	662	666	662	658
656	637	679	683	683	681	679	670	662	660	664	664
651	654	691	689	687	683	679	672	668	660	662	662
647	658	687	685	681	681	679	676	660	654	664	664
654	668	681	679	695	678	664	668	674	660	662	654
658	654	668	681	691	679	656	666	653	660	662	658
647	635	662	674	685	683	658	664	664	662	664	660
628	628	654	681	697	672	672	666	664	660	664	664
620	632	678	685	691	674	676	670	664	660	662	666
614	643	691	681	685	678	679	662	658	662	658	668
632	647	695	683	681	679	674	664	664	664	658	664

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 24	1 22	1 27	1 19	1 23	1 25	1 26	1 22	1 20	1 14	1 14	1 14
1 24	1 23	1 23	1 17	1 24	1 23	1 24	1 20	1 19	1 10	1 14	1 11
1 24	1 24	1 20	1 20	1 25	1 22	1 26	1 21	1 22	1 11	1 14	1 11
1 24	1 21	1 16	1 19	1 24	1 22	1 24	1 22	1 30	1 12	1 13	1 11
1 26	1 21	1 19	1 18	1 24	1 22	1 23	1 18	1 18	1 13	1 15	1 10
1 26	1 21	1 20	1 23	1 23	1 13	1 24	1 17	1 12	1 14	1 14	1 13
1 22	1 26	1 20	1 24	1 25	1 24	1 30	1 16	1 17	1 14	1 13	1 14
1 22	1 29	1 25	1 27	1 26	1 24	1 31	1 17	1 16	1 14	1 13	1 12
1 25	1 32	1 26	1 26	1 23	1 24	1 28	1 15	1 16	1 14	1 11	1 12
1 24	1 29	1 25	1 25	1 31	1 26	1 25	1 14	1 17	1 14	1 11	1 12
1 26	1 28	1 18	1 23	1 34	1 27	1 20	1 20	1 24	1 15	1 12	1 11
1 22	1 28	1 19	1 22	1 28	1 26	1 18	1 16	1 21	1 13	1 13	1 12

Vertical Intensity.

80	78	75	76	76	75	77	76	77	76	77	77
79	77	74	77	76	76	75	76	76	76	76	77
78	75	75	76	75	76	76	76	75	76	77	79
77	75	76	76	75	77	77	77	75	76	77	78
76	75	75	76	75	76	76	77	77	77	77	78
76	76	75	76	76	77	76	75	76	76	77	77
76	75	76	76	76	76	76	76	76	76	77	77
76	77	75	76	75	75	76	77	77	76	77	77
77	77	75	76	77	75	76	79	77	76	77	77
78	76	75	76	76	76	76	77	77	77	76	77
79	76	76	76	76	76	76	77	76	77	77	77
78	75	76	76	75	75	75	77	76	76	77	77

Auroral Observations.

h.	m.	
A.M.		
8	30	Arch (1·5) from S.E. through zenith to N.W. in rapid motion at zenith. 8.32. Brighter and prismatic.
8	35	Curtain-shaped aurora (1·5) all over the sky with less motion.
8	40	„ very faint, the greater part disappeared.
8	45	„ disappeared, arch (1·5) from S.E. to N.W., 30° alt., prismatic.
8	55	Patches (·7) from S.E. to N.W., 25° alt.
9	5	Arch (1) from E. to N.W., 30° alt. 9.15. Disappeared. Faint, diffused light in N.W., 25° alt.
9	20	Faint patches (·5) from E.S.E. to N.N.W. on horizon. Faint aurora (·3) from E.S.E. to zenith.
9	22	Bar (1) from N.N.E. to N. 8° alt. Mass of aurora (·5) in N.N.W., 5° alt.
9	30	Patch in N.N.W., 30° alt. Arch (1) from E.N.E. to N.N.W., 35° alt.
9	35	Arch (·3) from E.N.E. to N.N.W., 45° alt.
9	40	„ irregular (·5) and 25° alt. 9.45. Disappeared except a faint patch in N.N.W., 20° alt.
9	50	Very faint patch on horizon in E.S.E. 9.55. Faint streak (·3) from N.N.W. to zenith.
10	0	Arch (·3) from E.S.E. to W., 45° alt. Faint aurora (·2) from E.S.E. to N.N.W., 35° alt.
10	5	Above arch brighter (·5) and the faint aurora (·3) through zenith.
10	10	Arch diffused and the other aurora brighter (1) and striated.
10	15	Faint streaks in zenith. Two arches (·5) from E.S.E. to W. 45° and 55° alt.
10	20	Lower arch as before, the other irregular (·3) and 75° alt.
10	25	Both arches very faint, till 10.55.
11	0	Upper arch disappeared, the other (·2) and 35° alt.
11	20	Arch as before. Diffused band from E.N.E. through zenith to N.N.W. (·5 to 1), brightest in E.S.E.
11	25	Band very faint. 11.30. Disappeared. Arch much diffused and very faint. 11.45. Aurora disappeared.
P.M.		
12	20	Faint streaks (·3) from S.E. to S.W., 20° alt.
12	30	Faint streak in N.N.W., 5° alt. Bank (·5) on horizon from N.N.E. to N.N.W. and to about 5° alt.
12	45	Arch (·5) from N.N.E. to N.N.W., 5° alt.

April 1, 1883. $\varphi = +62° 38' 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	670	674	681	728	714	763	730	637	637	633	662	624
5	662	683	678	695	714	777	716	612	674	687	595	649
10	660	695	681	716	734	784	699	572	720	609	597	664
15	654	705	701	710	736	781	691	548	790	656	624	654
20	641	699	707	732	749	782	687	459	676	654	664	662
25	643	712	712	736	755	788	679	519	622	681	666	664
30	662	701	724	730	747	765	679	601	687	658	660	670
35	649	722	747	736	745	771	685	510	672	681	674	672
40	645	693	769	741	755	777	678	589	664	697	683	664
45	653	676	732	743	749	773	668	666	668	662	656	654
50	656	678	736	734	761	755	676	653	658	662	653	630
55	666	683	743	732	757	741	649	599	639	678	641	601

Declination. 38° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	2 3	2 5	2 3	2 18	2 6	1 54	2 0	2 10	1 43	2 8	1 52	2 20
5	2 5	2 4	2 2	2 13	2 4	1 57	2 0	2 30	1 53	2 34	1 16	2 15
10	2 6	2 2	2 0	2 3	2 0	1 57	2 0	2 56	2 0	2 20	1 45	2 8
15	2 7	2 0	1 58	2 4	2 2	1 56	2 0	2 38	1 24	2 9	1 59	2 13
20	2 8	2 2	1 57	2 2	2 4	1 56	2 0	2 16	0 47	2 0	2 4	2 11
25	2 6	2 4	1 57	2 1	2 6	1 55	2 2	2 21	1 20	1 54	1 58	2 10
30	2 8	2 4	1 58	2 0	2 6	1 53	2 1	1 28	1 54	1 59	2 6	2 8
35	2 8	2 2	1 59	2 1	2 4	1 56	2 1	1 34	2 10	1 57	2 9	2 10
40	2 6	2 4	2 0	1 59	2 2	1 56	2 3	1 54	2 0	1 52	2 7	2 10
45	2 6	2 2	2 2	1 56	1 58	1 54	2 2	1 42	2 1	2 1	2 10	2 12
50	2 6	2 6	2 9	1 58	1 56	2 0	2 5	1 39	2 9	2 8	2 10	2 13
55	2 5	2 4	2 12	2 2	1 52	2 2	2 9	1 39	2 4	2 7	2 15	2 24

Vertical Intensity. 0·6100 (C.G.S.) +

0	78	77	79	78	78	77	74	68	77	79	66	83
5	78	77	78	77	77	77	73	68	82	74	59	83
10	77	77	77	75	77	77	74	66	75	73	76	79
15	78	79	78	74	77	77	74	58	55	76	82	78
20	77	79	78	74	77	77	74	61	67	75	82	81
25	76	78	79	75	77	76	74	62	82	72	82	82
30	76	77	81	75	77	75	75	55	83	74	81	82
35	77	78	81	76	80	74	74	74	81	76	81	81
40	77	79	79	75	79	74	75	75	83	73	81	82
45	77	78	77	76	79	74	75	72	82	75	82	82
50	77	79	76	77	78	74	74	73	79	76	83	82
55	77	79	76	78	77	73	72	76	81	73	82	81

Auroral Observations.

h.	m.	A.M.
4	57	Arch (1) from E.S.E. to N.N.W., 15° alt.
5	10	Arch (·5 to 1) from E.S.E. to N.N.W., 20° alt., brightest in N.N.W.
5	21	„ very faint. Striated streak (·5) in N.N.W., 10° to 20° alt.
5	26	Masses of aurora (1) in E.S.E. Arch (·5) from E.S.E. to N.N.W., 30° alt.
5	35	Above arch diffused and irregular (1), 60° alt. Faint aurora (·3) from E.S.E. to S.W., 30° alt.
5	47	Arch from E.S.E. to N.N.W. very faint, except at extremities (·7), curtain-shaped in N.N.W., the other arch as before. Masses of aurora now (·7).
5	51	Streamers at N.N.W. end of above arch (1) and to 30° alt.
6	1	Arch (·5) from E.S.E. to N.N.W., diffused, striated, and through zenith. Arch from E.S.E. to S.W. very faint and 20° alt. in S.W. Another arch (·3 to ·7) from E.N.E. to E.S.E., where brightest, 5° alt.
6	12	Above disappeared, Two arches from E.S.E. to N.N.W., one passing about 5° S. of zenith, the other about 10° N.E. of zenith, slightly diffused (·7).
6	26	Above arches (·7) in one and through zenith, where about 10° wide. 6.37. Drifting towards S.
6	43	„ (1·5) in E.S.E. and (1) in other parts.
6	50	„ through zenith, and much diffused; (2) from E.S.E. to zenith, the rest (1·5).
6	56	„ regular in brightness (1) except from E.S.E. to 15° alt., where (2) and slightly prismatic; lower edge of arch about 70° alt. in S.W.
7	0	„ about 20° wide and irregular, prismatic streamers on N.E. edge, quivering and in rapid motion (1·5 to 2·5), brightest on N.E. edge.
7	6	„ very irregular (1) and about 10° wide. Bright irregular masses on horizon from E.S.E. towards E., prismatic (2) and about 15° alt.
7	10	Above arch (·5) except in N.N.W. where (2), with prismatic streamers. Bright masses (1·5) on horizon from E.S.E. to E. to 5° alt.
7	15	The whole sky from 15° alt. E.S.E. to N.W. and 5° S. of zenith, more or less covered with aurora (·7). Arch (2) with prismatic streamers from N.N.W. to E., 7° alt.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *April* 1, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
622	620	533	685	645	708	674	687	664	676	649	654
653	626	531	689	635	708	678	687	664	668	643	660
654	620	529	695	651	703	681	672	674	664	649	660
660	618	536	685	666	699	681	678	674	666	649	662
668	609	542	685	674	691	685	683	666	670	651	666
653	601	559	674	683	689	681	683	666	674	645	664
653	567	588	664	691	679	674	679	664	670	645	670
645	540	607	658	703	664	672	676	660	664	647	668
647	529	620	647	708	666	685	674	651	666	651	668
630	521	624	653	716	664	691	672	666	656	647	670
624	523	653	651	720	664	691	676	668	653	653	672
624	521	670	651	714	664	691	676	676	649	653	668

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 23	2 28	2 56	2 25	2 36	2 18	2 24	2 17	2 15	2 15	2 6	2 6
2 21	2 26	2 54	2 22	2 34	2 18	2 24	2 17	2 18	2 10	2 6	2 5
2 20	2 26	2 54	2 20	2 28	2 19	2 21	2 18	2 17	2 10	2 5	2 5
2 20	2 25	3 0	2 20	2 27	2 20	2 21	2 21	2 12	2 10	2 6	2 5
2 14	2 29	2 51	2 21	2 27	2 19	2 20	2 16	2 12	2 13	2 7	2 6
2 21	2 31	2 49	2 24	2 24	2 19	2 20	2 13	2 13	2 12	2 7	2 6
2 19	2 36	2 41	2 27	2 24	2 18	2 22	2 12	2 12	2 12	2 8	2 5
2 22	2 40	2 40	2 26	2 19	2 22	2 21	2 12	2 13	2 10	2 7	2 5
2 21	2 41	2 36	2 28	2 22	2 24	2 21	2 14	2 20	2 7	2 6	2 4
2 22	2 40	2 39	2 31	2 17	2 25	2 20	2 15	2 22	2 4	2 7	2 5
2 23	2 44	2 35	2 32	2 18	2 24	2 17	2 15	2 20	2 5	2 7	2 3
2 25	2 47	2 29	2 33	2 18	2 24	2 14	2 15	2 20	2 5	2 6	2 3

Vertical Intensity.

84	90	83	78	76	77	81	82	81	82	82	83
83	90	84	78	76	78	82	82	81	82	82	82
84	91	83	78	76	80	82	82	82	82	83	82
84	92	86	78	76	79	82	83	82	83	83	83
82	92	83	78	76	82	82	82	81	83	83	83
85	92	84	79	76	82	83	82	82	82	83	83
85	94	81	79	76	82	82	81	82	83	83	83
86	91	80	79	76	82	82	81	81	83	83	82
87	89	79	79	77	82	83	82	82	83	83	82
87	87	79	79	77	82	82	82	81	83	83	83
87	85	77	79	78	81	82	82	82	82	83	82
88	82	80	76	77	81	82	82	82	82	83	82

Auroral Observations.

h. m. A.M.	
7 20	Above aurora (·5) except in N.W., where irregular and (1). Arch (1).
7 27	Double arch (1·5) with streamers from E. to N.N.W., 15° alt. Faint masses (·3) from E.S.E. to zenith and extending to about 5° alt. S.W.
7 35	Faint broad irregular aurora from E.S.E. to N.W. (·3), except in N.W., where (·7). Single arch (1) from E.S.E. to N., where striated, 5° alt.
7 40	Aurora very faint and extending to 20° S. of zenith. Arch (1·5) and alt. 7°.
7 45	Aurora disappeared, except arch from N. to E.N.E. (2) and irregular. Very faint arch from E.S.E. to W.N.W., alt. 15° in S.
7 50	First arch now from N.N.W. to E. (2), 5° alt., other arch as before. Faint streamers (·3) in N.N.W., 15° alt.
7 55	Arches as before, E. end of arch partly hidden behind clouds. Streamers (·7) from 15° alt. to 60° alt. towards E. Faint masses (·5) on N.N.W. horizon.
8 0	Faint streak (·5) in N.E. and zenith.
8 5	Arch from N.N.W. to E. (1), other arch as before. Streaks disappeared.
8 10	Arch now from N.N.W. to E.S.E., where visible through clouds, (1·3) in N.N.W. and 5° alt. Faint masses (·5) in E.S.E., 7° alt.
8 18	Corona in zenith (·6) drifting towards N.W.
8 20	Folds of aurora (1·5) in N.N.W. to 15° alt. Faint aurora in N. between clouds. Faint streamers in zenith to Leo.
8 25	Auroral light nearly all over the sky, brightest in N.N.W., sky rapidly clouding over.
8 29	Bright aurora (2) from N. to N.N.E., 3° alt.
8 35	Aurora (1) visible between clouds, till 10.25.
11 55	Bank of aurora (1) from N.N.W. to E.N.E., 5° to 15° alt., partly visible between clouds.

April 15, 1883. $\Phi = +\ 62^{\circ}\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	658	662	670	676	679	691	689	689	687	656	635	612
5	654	660	670	676	681	687	689	691	687	676	626	626
10	658	662	670	678	683	687	689	691	687	679	589	658
15	658	664	672	678	683	685	687	691	674	683	610	668
20	662	662	678	679	681	683	689	691	681	681	589	668
25	658	666	678	678	681	683	689	689	685	685	582	550
30	660	666	683	681	681	685	687	689	685	687	576	557
35	662	666	679	681	685	685	689	689	689	687	580	595
40	662	668	683	683	685	685	687	687	691	687	569	588
45	660	666	679	685	687	689	687	685	691	689	567	527
50	658	666	679	685	691	689	689	685	668	614	576	546
55	662	666	676	683	693	687	687	687	647	622	587	531

Declination. 39°+

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	1 7	1 5	1 6	1 8	1 10	1 9	1 8	1 9	1 9	1 5	1 3	1 17
5	1 6	1 5	1 6	1 9	1 9	1 9	1 8	1 8	1 9	1 5	1 4	1 18
10	1 5	1 5	1 6	1 8	1 10	1 9	1 8	1 8	1 8	1 7	1 28	1 14
15	1 4	1 5	1 6	1 9	1 10	1 9	1 8	1 8	1 6	1 7	1 11	1 11
20	1 5	1 5	1 5	1 9	1 9	1 9	1 9	1 8	1 7	1 7	1 1	1 13
25	1 5	1 5	1 5	1 7	1 9	1 8	1 9	1 8	1 7	1 8	1 9	1 27
30	1 5	1 5	1 4	1 9	1 10	1 9	1 9	1 8	1 7	1 8	1 15	1 33
35	1 5	1 5	1 6	1 8	1 9	1 8	1 9	1 8	1 7	1 9	1 21	1 26
40	1 6	1 5	1 6	1 9	1 9	1 9	1 9	1 9	1 8	1 8	1 22	1 25
45	1 6	1 5	1 6	1 9	1 10	1 9	1 9	1 9	1 8	1 7	1 25	1 23
50	1 7	1 6	1 7	1 8	1 9	1 9	1 9	1 9	1 7	1 19	1 21	1 27
55	1 5	1 6	1 7	1 9	1 9	1 8	1 9	1 9	1 10	0 59	1 21	1 25

Vertical Intensity. 0·6100 (C.G.S.) +

0	79	79	82	84	83	81	82	82	82	81	82	89
5	79	79	82	83	84	79	82	82	81	82	87	90
10	79	81	82	82	83	80	82	83	81	81	84	90
15	78	81	81	81	84	81	82	83	81	82	81	88
20	79	81	81	81	83	81	82	83	80	82	77	88
25	78	82	83	81	83	81	82	83	81	83	78	79
30	79	82	82	82	81	82	83	82	81	83	83	72
35	78	79	82	82	82	82	82	82	81	83	86	74
40	79	81	83	82	82	81	82	82	81	82	86	77
45	79	82	83	82	82	82	82	82	81	82	85	82
50	79	80	82	83	82	82	81	82	82	78	86	80
55	79	82	83	84	81	82	81	82	80	79	88	79

Auroral Observations.

h.	m.	
A.M.		
8	50	Faint arch from E.S.E. through zenith to N.N.W., partly visible through clouds. Sky overcast.
9	5	,, disappeared.

$\lambda = -115^\circ\ 43'\ 50'' = -7\text{h. } 42\text{m. } 55\text{s.}$ Göttingen Mean Time. *April* 15, 1883.

Horizontal Intensity

Noon.	1	2	3	4	5	6	7	8	9	10	11
567	685	676	633	555	593	681	685	678	666	649	678
565	685	672	628	555	597	691	683	674	664	653	679
561	683	672	609	544	601	683	679	674	662	656	683
603	676	678	597	555	610	685	685	685	662	649	683
618	683	679	565	534	620	693	676	683	660	662	681
632	687	666	569	523	628	685	674	676	666	666	681
645	687	664	578	504	639	685	672	676	662	670	681
654	685	668	582	533	643	691	672	670	658	681	681
656	683	666	574	542	654	693	674	668	656	681	685
664	679	656	572	561	658	664	674	670	653	679	679
672	672	645	567	553	666	687	676	674	651	678	683
678	672	645	567	572	674	691	678	670	654	666	691

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 17	1 12	1 12	1 28	1 49	1 49	1 31	1 28	1 15	1 12	1 6	1 2
1 27	1 13	1 13	1 31	1 48	1 45	1 23	1 29	1 13	1 13	1 6	1 0
1 29	1 13	1 16	1 34	1 52	1 44	1 33	1 22	1 16	1 13	1 4	0 58
1 19	1 15	1 15	1 38	1 51	1 37	1 30	1 18	1 18	1 11	1 5	1 1
1 26	1 14	1 13	1 45	1 59	1 36	1 35	1 19	1 20	1 11	1 6	1 1
1 20	1 13	1 13	1 47	2 0	1 35	1 27	1 16	1 20	1 12	1 7	1 1
1 20	1 12	1 15	1 47	2 9	1 33	1 28	1 17	1 18	1 7	1 5	0 57
1 19	1 12	1 15	1 48	2 5	1 33	1 33	1 19	1 14	1 7	1 5	0 57
1 17	1 12	1 16	1 47	2 9	1 31	1 22	1 17	1 18	1 3	1 5	0 57
1 17	1 11	1 19	1 47	2 4	1 29	1 33	1 15	1 19	1 2	1 5	0 57
1 14	1 11	1 24	1 43	2 4	1 28	1 31	1 18	1 16	1 4	1 4	0 56
1 14	1 14	1 22	1 45	1 55	1 30	1 26	1 15	1 13	1 3	1 3	0 55

Vertical Intensity.

78	82	83	83	89	75	79	81	81	82	79	82
81	82	83	85	90	76	79	80	81	81	79	82
82	82	83	86	88	76	80	80	81	81	79	82
82	82	83	84	88	76	80	81	82	81	79	82
82	82	82	86	86	77	79	81	82	80	79	82
82	82	82	87	87	77	80	81	81	81	80	82
82	82	82	86	84	77	80	81	81	80	80	81
81	82	83	88	80	79	80	80	80	79	81	81
82	82	83	87	81	79	80	81	82	80	81	81
82	82	83	87	76	79	81	81	82	81	81	81
83	82	83	87	76	79	81	81	82	79	81	81
83	82	84	89	77	79	81	81	83	79	81	82

May 1, 1883. $\varphi = +\ 62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	664	660	683	697	732	743	697	656	607	683	660	681
5	658	658	683	697	722	745	668	676	607	685	668	679
10	637	668	683	708	738	751	666	679	582	679	645	677
15	677	664	685	705	730	751	664	679	536	670	656	668
20	647	660	683	708	734	738	660	676	548	658	664	651
25	647	672	674	703	740	743	662	685	570	676	647	651
30	653	674	683	710	741	745	674	647	588	637	635	647
35	639	672	689	712	751	747	691	472	601	630	649	656
40	670	666	697	716	749	736	701	525	632	635	641	660
45	658	668	693	716	751	724	703	467	630	677	679	664
50	660	679	687	726	749	712	679	412	647	660	674	630
55	658	685	701	728	753	712	662	506	654	687	681	622

Declination. 39° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	1 0	1 5	1 5	1 4	1 0	1 2	1 9	0 50	1 8	1 2	1 8	1 16
5	1 2	1 6	1 8	1 4	0 58	1 1	1 14	0 52	1 13	1 0	1 8	1 16
10	1 1	1 5	1 6	1 4	0 59	1 4	1 1	0 54	1 15	0 58	1 10	1 18
15	1 2	1 7	1 6	1 2	1 3	1 4	1 1	0 54	1 12	0 59	1 8	1 20
20	1 6	1 8	1 6	1 2	1 8	1 1	0 56	0 56	1 15	1 12	1 11	1 23
25	1 5	1 6	1 6	1 3	1 8	1 1	0 46	1 0	1 16	1 5	1 14	1 22
30	1 4	1 9	1 4	1 2	1 9	0 59	0 44	1 2	1 13	1 17	1 12	1 22
35	1 7	1 8	1 6	1 2	1 7	0 58	0 48	0 35	1 12	1 8	1 13	1 22
40	1 2	1 6	1 4	1 1	1 8	1 0	0 44	1 0	1 2	0 54	1 2	1 30
45	1 6	1 3	1 6	1 2	1 5	1 7	0 52	1 17	1 5	0 58	1 16	1 35
50	1 7	1 2	1 6	1 2	1 6	1 4	0 58	1 12	1 2	1 5	1 18	1 33
55	1 6	1 4	1 6	0 59	1 4	1 6	0 54	1 11	1 3	1 1	1 16	1 34

Vertical Intensity. 0·6100 (C.G.S.) +

0	77	77	77	74	74	70	64	73	91	83	76	80
5	77	76	75	75	74	68	63	73	87	81	79	80
10	77	76	76	75	73	69	63	74	82	79	81	81
15	76	76	76	75	75	68	62	75	85	78	81	81
20	76	77	76	75	74	69	64	76	86	79	83	81
25	76	76	76	74	74	69	63	77	86	76	82	80
30	76	76	76	74	73	67	65	95	86	72	80	79
35	77	76	75	74	71	67	67	90	81	79	79	76
40	77	76	75	75	72	67	66	106	86	82	80	77
45	77	75	75	74	71	67	67	94	85	81	81	81
50	77	77	75	74	70	67	71	103	82	81	80	82
55	77	76	74	74	70	68	70	100	83	77	81	83

Auroral Observations.

h. m.	
A.M.	
6 0	Aurora from E.N.E. to zenith, passing through ϵ, ζ, η Ursæ Majoris (·3).
6 3	„ and streamers in N.W. (·3). 6.5. Fainter. 6.6. Disappeared.
h. m. s.	
6 12 20	Faint segment from E.N.E. to β Ursæ Minoris (·3).
6 13 20	Segment (·3), from E. of Arcturus towards Ursa Major. 15.20. Segment brighter (·5) and extending towards N.W.
6 17 0	„ fainter and nearer zenith. 18.0. Fainter (·1) and through Ursa Major.
6 19 0	„ brighter (·5) and a streamer in E.N.E., 30° to 50° alt.
6 20 20	Fainter (·3) and more diffused in E.N.E.
6 22 0	A streak (1) slightly striated in E.N.E., alt. 30° to zenith.
6 23 40	Irregular arch (·7) through Ursa Major and Capella, streamers in N.E.
6 24 40	Aurora in N.E. fainter. 25.40. Aurora disappeared except irregular patch in N.W. (·4), 45° alt.
6 28 0	Segment in E.N.E. (·3), 30° alt., and streamers (·5) between Capella and α and β Geminorum.
6 31 0	Arch from 10° alt. in E.N.E. to Polaris, faint patch as before in N.W.
6 33 20	„ (·6) extending from 10° alt. in E.N.E. to Capella, passing between Polaris and Ursa Major.
6 35 0	„ disappeared except patch (·4) in E.N.E.
6 36 0	Faint arch (·3) through zenith to E.N.E. 36.40. Fainter and 5° farther to S.W.
6 38 0	Aurora disappeared.
6 39 40	„ from Ursa Major to E. horizon. 40.40. Aurora extending to Capella (·6). 42.30. Aurora fainter and more diffused.
6 44 0	Narrow streak (·9) through ϵ, ζ, η Ursæ Majoris. Faint light in S.W., 25° alt.
6 45 20	„ fainter, and light in S.W. disappeared. 47.0. Arch through Leo (·2).
6 48 0	A good deal of diffused light (·2) S.W., S., and S.E. of zenith. Streamer (·2) in N.E.
6 49 40	Faint streamers (·2) converging in Ursa Major.
6 50 40	„ disappeared leaving nebulous light.
6 53 0	Streamer (1) in Ophiuchus. Nebulous arch (·5) thence through Ursa Minor towards Auriga. Patch (·5) in W.S.W., 30° alt.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *May* 1, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	0	11
605	620	656	677	656	672	639	654	697	710	749	761
582	630	672	679	654	670	641	662	695	722	755	779
546	630	677	674	651	670	653	674	697	720	757	810
559	647	687	664	651	660	647	687	708	730	747	824
499	654	687	672	651	653	643	689	708	728	743	814
521	647	689	679	653	656	639	691	701	730	743	810
542	641	689	683	656	660	639	683	703	730	755	814
517	643	691	681	662	662	643	683	697	732	769	837
542	656	691	679	668	653	643	683	699	734	775	853
567	668	677	674	674	639	639	693	701	732	759	845
591	666	683	672	674	635	639	699	708	747	761	839
601	660	681	662	674	637	653	697	708	761	761	810

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 26	1 34	1 33	1 26	1 33	1 36	1 46	1 29	1 22	1 20	1 19	1 16
1 27	1 34	1 32	1 26	1 33	1 36	1 44	1 25	1 24	1 22	1 16	1 14
1 30	1 27	1 28	1 28	1 34	1 32	1 40	1 24	1 23	1 20	1 20	1 6
1 26	1 26	1 28	1 31	1 36	1 35	1 40	1 31	1 24	1 20	1 19	1 7
1 34	1 30	1 26	1 30	1 36	1 40	1 40	1 28	1 23	1 17	1 20	1 12
1 33	1 35	1 22	1 29	1 36	1 45	1 36	1 25	1 16	1 16	1 18	1 3
1 32	1 38	1 23	1 29	1 37	1 49	1 42	1 28	1 10	1 13	1 19	1 2
1 40	1 40	1 26	1 30	1 38	1 51	1 42	1 26	1 8	1 15	1 20	0 58
1 39	1 36	1 28	1 29	1 38	1 48	1 40	1 25	1 8	1 17	1 19	1 4
1 38	1 29	1 30	1 29	1 38	1 48	1 39	1 23	1 6	1 18	1 15	1 11
1 34	1 29	1 29	1 31	1 38	1 49	1 36	1 27	1 8	1 16	1 12	1 16
1 43	1 30	1 28	1 34	1 38	1 46	1 36	1 26	1 12	1 19	1 16	1 18

Vertical Intensity.

83	76	74	74	74	73	69	68	70	73	74	74
84	77	73	75	74	73	69	68	70	74	74	74
86	77	73	75	74	73	69	69	70	74	73	73
88	75	73	74	74	73	69	69	70	73	75	73
85	74	73	74	73	72	68	69	70	74	75	73
84	74	74	74	73	72	68	70	71	74	74	74
84	73	73	75	73	71	68	70	71	74	74	72
77	76	73	74	73	71	68	70	71	75	75	72
76	74	74	75	73	70	68	71	71	75	74	74
77	75	74	75	73	69	68	70	70	76	75	76
76	75	74	75	73	70	68	70	71	75	74	74
77	74	75	74	73	69	68	70	72	75	74	74

Auroral Observations.

h.	m.	s.	
A.M.			
6	55	30	Above arch slightly brighter, streamer disappeared.
6	56	40	„ through Ursa Major about 10° in breadth. 58.0. Through Gemini.
6	59	0	„ more diffused, and extending to Arcturus. Diffused light in E.N.E.
7	0	0	„ disappeared. Segment of arch (1) just below β Geminorum.
7	5	0	Diffused mass in E.S.E. to 10° alt., 5° wide.
7	10	0	„ and arch (1·5) from S.E. to S.W., 14 alt.
7	15	0	Arch now (·5). 7.20. Now interrupted in the centre.
7	30	0	Curtain-shaped striated aurora (2) from E.S.E. to N.N.W. to zenith, in rapid motion.
h.	m.		
7	32		Corona (2·5) in zenith, prismatic. 7.35. More or less aurora (1 to 2·5), brightest in N.N.W.
7	45		Arch (1·5) from N.N.E. to S.W., with streamers, N.N.E. to S.W., faint streamers in zenith.
7	50		Diffused aurora from S.W. horizon to zenith (1). Faint aurora from zenith to N.N.E.
7	55		Aurora very faint. 8.0 to 8.10. Disappeared, except faint patches from S. to W.S.W. from 5° to 10° alt.
8	15		Streak (·5) from E.S.E. to zenith. 8.20. Disappeared.
8	31		Very faint streamers in N.N.W., 45° alt.
8	41		Corona in zenith (1), streamers (·7) from 70° alt. in N.N.W. to 50° alt. in E.S.E., passing 15° E.N.E. of zenith.
8	45		„ disappeared except a few streamers (·5) in N., 70° alt.
8	56		Faint masses in zenith (·3).
9	5		Diffused arch (·7) from E.S.E. through Zenith to N.N.W., disappearing under clouds at extremities.
9	10		„ irregular (1) and drifting towards N.E. 9.15. Through zenith, regular and (1·5).
9	26		„ 70° alt., partly visible through clouds (1). 9.30. Very faint.
9	35		„ disappeared except a faint streak (·5) in N.N.E., 75° alt.
9	41		Faint masses (·7) in N.N.W., 20° alt., faint band (·5) from S.E. to S.S.W., 10° alt. 9.46. Disappeared.

May 15, 1883. $\Phi = +62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	683	685	695	689	703	730	706	662	664	599	612	612
5	683	689	695	691	712	726	706	666	654	557	628	622
10	683	691	693	689	720	724	714	676	651	559	641	610
15	683	687	695	687	720	726	708	670	656	563	643	586
20	683	683	693	687	728	736	701	672	605	559	632	599
25	683	685	695	687	726	745	697	672	653	593	639	597
30	683	687	695	691	722	749	689	670	643	584	618	599
35	687	687	695	691	722	741	681	677	589	589	620	616
40	687	689	693	701	718	734	677	681	416	574	637	593
45	683	689	695	703	728	724	683	683	454	582	626	593
50	689	687	695	703	736	720	691	677	480	599	567	628
55	693	691	691	703	738	718	676	668	517	589	605	610

Declination. 39°+

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	1 8	1 8	1 8	1 11	1 11	1 7	1 0	1 1	1 6	1 24	1 14	1 18
5	1 7	1 7	1 8	1 10	1 8	1 7	1 4	1 2	1 3	1 17	1 18	1 14
10	1 7	1 8	1 9	1 11	1 6	1 8	1 6	1 4	1 2	1 29	1 9	1 14
15	1 7	1 6	1 10	1 12	1 5	1 7	1 7	1 4	1 9	1 26	1 5	1 14
20	1 6	1 8	1 10	1 12	1 4	1 8	1 6	1 2	0 52	1 22	1 7	1 17
25	1 6	1 8	1 10	1 12	1 5	1 7	1 7	1 1	1 0	1 18	1 11	1 22
30	1 7	1 8	1 10	1 12	1 6	1 4	1 7	1 3	1 2	0 56	1 6	1 19
35	1 7	1 8	1 10	1 12	1 7	1 6	1 4	1 4	0 50	1 4	1 18	1 16
40	1 7	1 8	1 12	1 10	1 7	1 4	1 2	1 5	0 48	1 9	1 10	1 23
45	1 7	1 8	1 10	1 10	1 8	1 1	1 4	1 8	0 58	1 8	1 6	1 29
50	1 7	1 8	1 10	1 10	1 6	1 1	1 6	1 9	1 3	1 6	1 9	1 17
55	1 7	1 8	1 11	1 11	1 6	1 0	1 2	1 10	1 12	1 10	1 15	1 20

Vertical Intensity. 0·6100 (C.G.S.) +

0	76	77	77	77	77	75	71	74	72	91	85	85
5	77	76	77	76	77	75	72	74	74	99	85	81
10	76	76	77	77	77	75	71	74	73	92	84	81
15	76	77	77	77	77	74	71	75	75	92	83	78
20	77	77	77	77	77	71	72	75	83	91	85	81
25	76	77	77	76	78	71	72	76	83	91	85	79
30	77	77	77	77	78	70	72	76	84	86	83	80
35	76	77	77	77	78	71	73	75	85	83	85	84
40	77	77	77	77	77	71	73	75	85	85	86	84
45	77	77	77	77	78	71	72	76	94	82	89	83
50	77	77	76	77	77	71	71	75	98	84	87	84
55	76	76	77	77	77	71	71	73	94	83	86	84

Auroral Observations.

h. m. s. A.M.	
7 42 0	Faint arch (·3) in S.W., 20° alt.
7 43 30	,, disappeared.
7 47 0	Segment of arch (·8) from E.S.E. to 60° alt.
7 49 20	Faint streamers (·7) in S.E.
7 50 40	Slightly brighter.
7 51 40	,, serpentine (1) and light more concentrated.
7 53 0	,, extending to 45° alt. (·9).
7 54 30	,, extending to above Arcturus (·5).
7 55 40	,, disappeared except nebulous light (·2) in S.E.
7 56 30	,, reappeared as at 53 m. with patch (1), alt. 5°.
7 58 0	Patch (·7) alone visible.
7 59 0	As at 55m. 40s.
8 2 0	,, and (·6).
8 5 0	Arch (1) from S.E. to W.N.W., 10° S. of zenith.

$\lambda = +115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *May* 15, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
630	626	645	614	649	653	670	687	701	674	677	685
626	610	643	630	643	654	670	697	693	672	674	685
599	624	643	630	645	647	666	693	693	672	676	685
593	622	649	639	651	647	666	691	695	670	674	683
595	609	660	639	653	649	672	695	695	674	674	685
605	603	666	633	651	651	681	695	697	674	672	687
614	622	668	643	654	635	679	697	697	677	676	689
610	620	656	639	656	653	681	701	683	676	676	687
595	620	651	643	654	662	689	697	691	674	679	681
618	626	637	647	658	683	685	697	691	676	679	683
626	632	633	645	653	670	685	695	691	674	683	681
633	639	624	651	654	672	677	697	679	677	683	683

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 26	1 42	1 41	1 49	1 48	1 38	1 30	1 23	1 16	1 2	1 6	1 8
1 22	1 46	1 41	1 42	1 48	1 37	1 30	1 20	1 16	1 4	1 8	1 10
1 24	1 47	1 36	1 43	1 48	1 37	1 31	1 19	1 16	1 4	1 8	1 10
1 23	1 48	1 36	1 48	1 44	1 39	1 29	1 18	1 16	1 5	1 8	1 10
1 28	1 48	1 34	1 49	1 40	1 39	1 34	1 17	1 13	1 4	1 8	1 10
1 25	1 51	1 34	1 52	1 38	1 38	1 33	1 17	1 14	1 4	1 10	1 10
1 27	1 44	1 34	1 52	1 35	1 36	1 32	1 18	1 15	1 4	1 10	1 10
1 30	1 42	1 36	1 56	1 36	1 37	1 30	1 18	1 18	1 5	1 9	1 10
1 39	1 42	1 40	1 55	1 36	1 35	1 25	1 16	1 16	1 6	1 10	1 10
1 40	1 42	1 46	1 52	1 35	1 34	1 22	1 16	1 8	1 6	1 10	1 10
1 39	1 43	1 50	1 51	1 35	1 32	1 20	1 17	1 5	1 6	1 10	1 10
1 39	1 42	1 53	1 48	1 37	1 31	1 22	1 18	1 2	1 5	1 10	1 9

Vertical Intensity.

83	83	76	74	71	73	74	77	77	77	77	77
86	82	78	74	71	74	74	77	77	77	77	77
87	82	77	74	72	73	75	78	77	77	77	77
86	82	76	74	73	73	75	79	77	78	78	77
83	82	79	75	72	73	75	79	77	78	78	77
85	79	77	74	72	73	75	78	77	78	77	78
84	81	76	73	73	73	75	77	77	78	77	78
83	82	79	73	73	74	75	77	77	78	77	78
83	78	77	73	72	74	76	77	77	77	77	77
85	77	77	73	73	74	76	76	77	77	77	77
85	77	76	73	73	74	76	76	77	77	77	77
83	76	75	72	73	74	76	77	76	77	77	77

Auroral Observations.

h.	m.	
A.M.		
8	15	Above arch disappeared. Patch (1) in S.E., 25° alt.
8	20	Arch (1·5) from S.E. to W.N.W., upper edge through Ursa Major, lower passing the Moon.
8	25	Arch (1) partly disappeared, passing halfway between zenith and Moon.
8	30	Arch (1·5) from E.S.E. passing Ursa Major to N.W., where diffused.
8	36	Diffused prismatic arch (2), with streamers in rapid motion from E.S.E. to N.W.
8	41	„ disappeared except a streak (1) in N.W. from horizon to 20° alt.
8	45	Streak in N.W. disappeared. Faint streak in zenith.
8	50	„ disappeared.
9	0	Irregular aurora (2) from E.S.E. to E. prismatic, 5° to 15° alt.
9	5	„ disappeared.

June 1, 1883. $\phi = +62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	676	687	769	777	763	818	712	767	726	691	691	678
5	683	676	757	781	738	814	637	781	730	691	689	679
10	687	705	755	782	732	796	540	757	728	693	689	676
15	687	722	761	775	734	782	506	722	720	695	687	681
20	670	730	759	784	769	757	584	718	716	691	685	674
25	693	736	769	784	784	745	510	728	712	689	681	670
30	695	749	769	786	810	710	555	734	708	689	681	674
35	716	771	767	781	814	720	597	734	705	687	683	674
40	706	753	767	773	822	687	651	740	703	685	676	656
45	701	751	761	769	828	678	738	732	701	691	679	431
50	695	757	767	747	841	651	753	734	701	687	674	414
55	708	765	769	781	841	708	741	732	697	687	674	366

Declination. 39° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	1 7	1 8	1 3	0 58	1 15	0 59	1 13	0 53	1 18	1 13	1 10	1 4
5	1 5	1 7	1 3	0 59	1 19	1 3	1 9	0 45	1 13	1 11	1 8	1 3
10	1 5	1 10	1 7	1 4	1 20	1 4	0 24	0 49	1 11	1 11	1 8	1 5
15	1 5	1 3	1 4	1 5	1 19	1 5	0 15	1 4	1 13	1 11	1 8	1 6
20	1 6	1 1	1 1	1 2	1 13	1 5	0 12	1 5	1 13	1 11	1 9	1 7
25	0 57	0 59	1 1	0 55	1 14	1 6	0 30	1 11	1 13	1 12	1 9	1 3
30	1 6	0 59	1 0	0 57	1 3	1 6	0 47	1 12	1 13	1 13	1 12	1 7
35	1 6	1 4	1 3	0 58	1 1	1 7	0 41	1 11	1 12	1 15	1 13	1 4
40	1 8	1 3	1 1	1 3	0 59	1 4	0 41	1 7	1 12	1 13	1 9	1 13
45	1 7	1 6	0 58	1 3	1 0	1 5	0 51	1 5	1 12	1 13	1 9	2 3
50	1 10	1 3	0 59	1 8	1 0	1 6	0 44	1 11	1 13	1 13	1 8	1 51
55	1 7	1 3	1 0	1 13	1 2	1 7	0 45	1 13	1 12	1 12	1 5	1 23

Vertical Intensity. 0·6100 (C.G.S.) +

0	79	81	83	79	73	71	71	71	76	75	80	82
5	79	81	83	79	75	71	68	69	76	79	81	82
10	80	82	83	76	74	72	51	71	77	78	79	83
15	80	81	83	76	75	73	64	72	76	78	78	84
20	80	81	83	76	77	73	62	75	76	79	77	84
25	78	82	81	77	76	72	71	74	75	79	79	84
30	79	82	81	77	76	71	81	77	74	79	79	84
35	81	83	80	79	77	70	84	74	74	80	79	84
40	81	82	79	79	76	74	87	75	74	81	81	86
45	81	82	79	77	73	72	70	76	74	80	81	106
50	82	82	79	77	73	77	72	76	74	81	82	81
55	81	83	79	74	71	73	71	77	75	80	82	86

Auroral Observations.

None.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *June* 1, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
342	542	714	660	620	624	622	635	645	676	683	718
338	582	710	645	616	633	624	635	639	679	687	718
348	620	710	645	609	635	622	649	649	679	695	728
414	647	710	639	618	641	639	664	653	660	695	724
470	668	714	637	614	639	647	662	656	666	697	718
353	679	703	632	603	643	635	653	658	666	703	712
409	681	691	632	591	645	630	653	664	664	706	716
381	685	699	633	601	643	633	641	656	666	708	722
392	703	693	624	601	637	626	645	664	668	714	734
433	708	685	622	616	630	639	645	658	668	714	751
463	710	683	614	620	633	630	656	666	679	712	753
502	710	668	628	624	626	624	653	677	689	718	759

Declination.

′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 35	1 32	1 25	1 37	1 53	1 52	1 57	1 42	1 19	1 11	1 5	1 7
1 23	1 29	1 29	1 41	1 57	1 49	1 55	1 43	1 19	1 14	1 9	1 7
1 42	1 29	1 25	1 40	1 59	1 50	1 55	1 43	1 19	1 18	1 7	1 4
1 52	1 29	1 28	1 44	1 59	1 50	1 49	1 41	1 20	1 13	1 6	1 3
1 39	1 28	1 29	1 46	2 4	1 51	1 47	1 36	1 17	1 11	1 6	1 5
1 52	1 28	1 25	1 39	2 5	1 50	1 55	1 25	1 16	1 4	1 9	1 4
1 33	1 27	1 33	1 51	2 4	1 48	2 6	1 25	1 17	1 3	1 9	1 0
2 2	1 27	1 27	1 51	2 1	1 46	1 51	1 25	1 17	1 7	1 11	1 1
1 58	1 25	1 31	1 53	1 53	1 52	1 48	1 18	1 13	1 5	1 10	1 2
1 43	1 24	1 32	1 54	1 56	1 53	1 47	1 17	1 10	1 5	1 7	1 4
1 34	1 25	1 33	1 56	1 59	1 51	1 43	1 18	1 9	1 5	1 5	1 5
1 36	1 25	1 36	1 52	1 51	1 54	1 43	1 19	1 13	1 5	1 6	1 4

Vertical Intensity.

88	87	81	79	74	70	70	71	75	78	80	82
86	85	81	79	73	69	71	71	75	78	80	82
89	83	81	79	73	69	71	71	76	79	81	83
91	83	81	79	73	70	71	71	76	77	81	82
83	83	81	78	71	70	71	71	75	78	81	82
92	81	81	77	71	71	73	72	75	78	82	83
86	81	80	77	70	71	73	73	76	77	82	83
90	80	79	76	69	71	72	73	76	78	82	83
90	80	80	75	70	71	70	73	77	79	81	83
93	80	81	75	69	71	71	73	77	80	81	83
90	80	81	74	70	71	71	73	77	80	81	83
88	81	79	74	71	70	71	74	77	81	82	83

June 15, 1883. $\phi = +\ 62°\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	681	705	708	755	710	703	685	701	697	689	705	701
5	681	705	714	757	701	699	687	701	697	689	703	701
10	681	699	740	763	701	693	691	701	697	685	699	699
15	706	701	730	759	708	689	693	699	693	689	697	697
20	703	701	736	745	706	685	687	699	691	687	691	699
25	699	701	738	753	699	683	691	699	693	693	695	701
30	708	697	743	745	701	683	691	699	691	701	697	697
35	710	703	724	732	706	683	695	699	687	701	699	695
40	708	701	716	720	712	683	695	697	683	693	697	693
45	706	699	712	714	722	685	695	697	695	695	697	691
50	706	701	722	714	716	683	697	693	695	697	697	691
55	703	703	738	712	710	683	699	697	685	703	699	689

Declination. 39°+

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	1 3	1 5	1 6	1 5	1 10	1 12	1 12	1 11	1 10	1 10	1 10	1 10
5	1 3	1 4	1 4	1 8	1 11	1 12	1 12	1 11	1 10	1 10	1 8	1 10
10	1 4	1 5	0 58	1 4	1 10	1 12	1 11	1 11	1 12	1 10	1 8	1 10
15	1 2	1 5	1 3	1 4	1 8	1 13	1 10	1 11	1 11	1 10	1 8	1 10
20	1 0	1 4	1 6	1 8	1 8	1 13	1 10	1 11	1 10	1 11	1 10	1 10
25	1 3	1 4	1 4	1 10	1 9	1 14	1 10	1 12	1 11	1 12	1 10	1 10
30	1 4	1 7	1 3	1 10	1 11	1 15	1 12	1 11	1 11	1 11	1 9	1 10
35	1 3	1 7	1 9	1 9	1 12	1 14	1 12	1 10	1 9	1 10	1 9	1 10
40	1 3	1 7	1 11	1 8	1 10	1 14	1 11	1 12	1 8	1 11	1 10	1 10
45	1 3	1 8	1 11	1 7	1 10	1 13	1 11	1 11	1 9	1 12	1 10	1 10
50	1 4	1 8	1 9	1 8	1 10	1 14	1 10	1 11	1 8	1 10	1 11	1 12
55	1 5	1 6	2 6	1 10	1 12	1 13	1 10	1 11	1 8	1 10	1 10	1 12

Vertical Intensity. 0·6100 (C.G.S.) +

0	79	79	79	81	77	78	77	79	79	76	79	80
5	78	79	79	80	77	79	78	79	79	77	77	80
10	78	79	79	78	77	79	78	79	78	78	79	80
15	79	79	81	77	78	79	78	79	78	79	79	81
20	79	79	80	79	79	79	78	79	79	79	79	81
25	78	79	79	79	80	78	78	78	79	79	79	80
30	78	79	79	77	81	79	79	78	79	79	79	81
35	78	79	81	76	81	79	79	78	79	78	80	81
40	79	79	81	76	79	78	79	79	77	79	81	80
45	79	79	81	76	79	78	79	79	78	79	80	79
50	79	79	81	77	78	78	79	79	78	79	79	79
55	79	78	82	77	78	78	79	79	79	79	79	80

Auroral Observations.

None.

$\lambda = -115^\circ\ 43'\ 50'' = -7\text{h. } 42\text{m. } 55\text{s.}$ Göttingen Mean Time. *June* 15, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
683	693	705	706	701	695	674	679	654	662	662	674
683	695	703	705	701	679	676	672	666	660	660	666
683	697	703	703	699	685	676	668	660	660	666	670
691	701	701	695	706	677	679	660	672	656	666	676
693	705	705	699	693	689	674	647	639	658	668	681
691	701	708	695	695	689	668	637	637	656	672	677
695	703	706	699	695	685	653	639	641	656	668	679
695	703	705	695	689	677	637	632	637	660	668	677
695	703	706	693	685	672	637	635	641	660	672	683
697	705	706	693	691	668	653	633	637	658	670	691
693	706	705	695	687	668	666	637	645	658	670	699
693	706	703	695	689	670	674	641	651	660	668	697

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 13	1 19	1 21	1 22	1 29	1 20	1 28	1 26	1 28	1 0	1 4	1 6
1 13	1 20	1 21	1 22	1 26	1 21	1 18	1 28	1 18	0 58	1 4	1 7
1 14	1 19	1 22	1 22	1 26	1 28	1 27	1 21	1 10	0 58	1 4	1 4
1 14	1 18	1 22	1 23	1 23	1 31	1 24	1 22	1 2	0 58	1 4	1 4
1 14	1 19	1 24	1 21	1 24	1 28	1 25	1 24	1 1	1 1	1 4	1 4
1 14	1 20	1 22	1 22	1 24	1 27	1 28	1 28	1 6	1 2	1 4	1 3
1 14	1 19	1 22	1 20	1 24	1 29	1 30	1 28	1 10	1 1	1 2	1 3
1 17	1 20	1 21	1 21	1 23	1 28	1 36	1 30	1 14	1 4	1 5	1 4
1 16	1 18	1 22	1 25	1 28	1 23	1 40	1 32	1 12	1 4	1 5	1 4
1 17	1 19	1 22	1 27	1 25	1 27	1 37	1 35	1 13	1 3	1 5	1 2
1 18	1 18	1 23	1 27	1 24	1 28	1 29	1 32	1 11	1 5	1 6	1 2
1 19	1 19	1 24	1 29	1 26	1 29	1 23	1 29	1 13	1 4	1 4	1 3

Vertical Intensity.

79	79	79	77	76	77	76	76	79	77	77	79
79	77	79	77	77	79	77	76	79	77	77	79
79	77	78	78	77	77	77	77	78	78	77	79
79	79	79	77	77	77	77	76	78	77	76	78
79	79	77	77	78	77	77	76	79	78	77	79
79	79	79	78	78	77	77	76	78	77	79	79
79	79	79	78	77	77	77	76	77	78	79	78
79	79	78	78	77	77	76	76	78	78	79	78
78	78	77	77	77	77	76	77	78	78	79	78
79	79	77	77	77	77	77	77	78	77	78	78
78	79	77	78	77	77	76	78	77	77	78	78
78	79	77	76	77	76	76	78	78	77	79	78

July 1, 1883. $\varphi = +62° 38' 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	895	570	643	706	788	701	480	693	666	662	637	628
5	885	553	660	699	788	718	448	693	708	666	548	628
10	833	551	660	773	839	693	572	697	703	609	487	641
15	769	574	485	771	826	722	624	687	676	633	548	639
20	751	567	559	749	798	691	616	674	695	544	476	662
25	720	595	610	869	782	649	633	649	691	499	544	670
30	712	632	697	962	761	563	643	654	703	601	487	677
35	708	599	734	901	771	506	679	660	697	626	512	732
40	668	576	749	773	741	470	668	662	676	641	525	712
45	654	591	771	769	716	225	672	672	677	643	538	626
50	588	591	755	777	763	361	681	654	666	641	570	660
55	589	651	759	753	771	533	687	672	658	664	601	681

Declination. 38° +

	° ′	° ′	′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	2 14	2 9	1 57	1 25	1 53	1 31	2 9	2 3	1 45	1 51	1 44	1 55
5	2 26	2 7	1 39	1 32	1 41	1 23	1 47	2 3	1 35	1 53	2 5	1 44
10	2 38	2 23	1 19	1 52	1 57	1 34	1 30	2 2	1 43	1 58	2 19	1 38
15	2 29	2 17	1 40	1 43	1 50	1 38	2 5	2 9	1 52	1 53	2 15	1 50
20	1 55	2 4	0 43	1 37	1 43	1 30	2 3	2 9	1 53	1 43	1 19	1 58
25	1 47	1 59	0 59	1 48	1 54	1 24	2 16	2 8	1 48	2 35	1 2	2 8
30	2 18	1 42	0 59	1 19	1 55	1 19	2 7	1 57	1 50	2 7	1 31	2 33
35	2 28	1 46	1 7	1 51	1 52	1 25	2 3	1 57	1 47	1 42	2 9	2 23
40	2 9	1 30	1 22	2 11	1 38	1 27	2 3	1 51	1 49	1 34	2 18	2 28
45	2 47	1 26	1 25	1 45	1 43	1 45	1 59	1 45	1 50	1 36	2 20	2 42
50	2 23	1 35	1 28	1 46	1 43	0 53	1 58	1 45	1 51	1 47	2 12	2 50
55	2 13	1 39	1 30	1 41	1 53	1 35	2 2	1 43	1 55	1 49	2 6	2 38

Vertical Intensity. 0·6100 (C.G.S.) +

0	53	29	54	53	60	63	54	73	83	86	92	101
5	49	26	51	56	57	70	71	74	84	88	98	103
10	42	35	50	50	63	68	66	74	82	93	86	101
15	30	38	56	49	58	67	68	73	83	96	92	98
20	33	40	47	49	65	66	68	73	86	90	86	99
25	30	43	44	51	66	72	64	72	87	97	84	93
30	38	47	44	52	66	71	65	73	85	96	101	96
35	39	46	47	58	66	64	68	76	86	92	108	94
40	33	46	49	50	67	70	71	77	85	91	109	99
45	31	47	52	48	76	66	71	79	86	90	98	104
50	29	48	52	51	75	87	71	81	86	89	106	101
55	26	52	53	59	69	62	73	83	86	90	98	104

Auroral Observations.

None.

$\lambda = -115° 43' 50'' = -7h. 42m. 55s.$ Göttingen Mean Time. *July* 1, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
689	536	624	533	435	427	519	574	607	710	779	865
695	551	624	440	379	435	546	569	649	706	779	893
691	588	630	398	379	459	569	578	645	693	800	930
683	616	628	383	386	470	569	610	654	710	808	934
679	632	632	418	390	527	595	643	635	747	814	934
641	597	637	467	370	523	580	632	649	730	830	942
643	586	616	420	373	527	572	580	662	747	847	954
576	603	609	517	364	555	565	567	662	745	841	907
610	607	593	546	362	542	540	578	660	753	839	895
563	607	589	521	372	565	521	584	664	753	853	944
559	618	586	478	409	521	534	578	687	771	871	889
542	630	536	452	411	531	544	586	724	784	873	810

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 38	2 36	2 16	3 23	3 34	4 23	3 29	3 5	2 38	2 18	2 19	2 27
2 24	2 42	2 23	3 27	3 35	4 21	3 22	3 5	2 29	2 15	2 31	2 32
2 15	2 24	2 23	3 21	3 41	4 12	3 19	2 59	2 6	2 21	2 19	2 33
2 5	2 9	2 27	3 45	3 42	4 11	3 18	2 53	2 22	2 35	2 20	2 24
2 8	2 1	2 22	3 30	3 59	3 59	3 10	2 56	2 32	2 25	2 24	2 22
2 17	2 3	2 31	3 11	4 1	3 49	3 7	2 59	2 35	2 27	2 21	2 25
2 5	2 15	2 37	3 41	3 43	3 35	3 13	2 55	2 27	2 16	2 15	2 15
2 9	2 28	2 51	3 17	4 1	3 17	3 8	2 57	2 29	2 9	2 15	2 11
2 4	2 24	3 2	3 17	4 6	3 53	3 6	2 50	2 34	2 15	2 20	2 35
2 11	2 26	2 49	3 8	3 59	3 30	3 3	2 36	2 33	2 18	2 21	2 33
2 30	2 21	2 52	3 31	3 39	3 40	3 7	2 32	2 29	2 18	2 18	2 20
2 32	2 27	3 21	3 49	3 50	3 37	2 57	2 33	2 21	2 18	2 23	2 30

Vertical Intensity.

104	108	104	111	120	70	64	69	75	81	82	75
104	110	104	107	112	75	66	69	76	81	82	77
103	110	113	109	104	73	67	70	77	82	82	79
102	109	112	105	102	78	68	70	76	83	82	81
102	107	111	109	95	73	68	71	75	81	82	79
103	104	109	111	96	70	68	71	77	80	80	74
102	103	104	104	89	69	69	71	76	78	81	69
106	103	100	110	87	69	67	73	79	80	80	70
103	103	100	110	90	70	68	73	78	77	80	65
104	104	101	108	84	68	68	73	79	78	77	60
103	104	99	106	81	71	69	73	81	78	75	58
104	105	100	115	76	71	70	75	78	79	75	55

July 15, 1883. $\phi = +62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	672	666	679	668	666	670	679	683	683	561	639	681
5	654	662	666	670	672	672	670	685	620	546	649	668
10	660	658	666	670	672	668	670	685	478	593	612	660
15	662	670	677	670	672	666	677	681	450	622	656	658
20	664	693	683	666	677	674	679	683	538	668	670	658
25	666	630	683	672	672	676	679	685	536	683	674	664
30	668	662	666	674	672	677	676	687	561	687	668	664
35	664	658	674	677	674	677	676	687	637	689	658	672
40	668	658	672	668	679	677	676	685	647	683	668	677
45	658	681	658	674	668	676	679	681	637	612	668	677
50	670	674	670	670	674	677	679	685	597	624	679	681
55	662	672	656	672	668	683	679	685	557	654	677	685

Declination. 39° +

	′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	1 7	1 6	1 7	1 11	1 14	1 14	1 17	1 14	1 6	1 22	0 55	1 18
5	1 8	1 6	1 8	1 10	1 14	1 16	1 16	1 15	1 4	1 4	0 53	1 23
10	1 8	1 4	1 6	1 11	1 13	1 17	1 15	1 14	2 2	1 4	1 1	1 23
15	1 7	1 4	1 6	1 12	1 12	1 16	1 14	1 13	1 46	1 9	1 4	1 21
20	1 6	1 6	1 7	1 12	1 13	1 15	1 14	1 12	1 26	1 7	1 6	1 22
25	1 6	1 8	1 8	1 12	1 14	1 16	1 14	1 10	1 36	1 7	1 10	1 22
30	1 6	1 8	1 9	1 12	1 14	1 16	1 14	1 10	0 58	1 10	1 15	1 21
35	1 6	1 6	1 10	1 12	1 13	1 15	1 15	1 8	0 58	1 12	1 20	1 20
40	1 6	1 4	1 10	1 13	1 14	1 16	1 14	1 8	1 4	1 9	1 18	1 18
45	1 7	1 2	1 10	1 12	1 14	1 15	1 14	1 7	1 9	0 36	1 16	1 21
50	1 5	1 5	1 11	1 13	1 15	1 15	1 15	1 9	1 6	1 3	1 18	1 18
55	1 5	1 6	1 12	1 14	1 15	1 14	1 14	1 8	1 9	0 54	1 18	1 19

Vertical Intensity. 0·6100 (C.G.S.) +

0	74	75	76	76	77	77	77	77	77	68	79	79
5	75	75	75	75	77	77	77	77	82	75	77	79
10	74	74	75	75	76	77	77	76	77	81	78	80
15	75	74	76	75	77	77	76	76	67	84	79	80
20	74	76	76	76	78	77	76	76	68	82	79	79
25	75	74	76	76	76	78	77	76	75	81	79	79
30	75	76	76	76	76	78	77	76	77	78	78	78
35	75	75	76	76	76	77	77	76	79	77	78	78
40	75	74	76	76	77	77	77	75	79	78	81	78
45	74	70	76	76	77	76	77	75	78	81	79	78
50	74	75	76	76	77	76	77	76	81	81	81	78
55	74	75	75	76	77	76	77	76	75	81	79	79

Auroral Observations.

h.	m.	A.M.
8	16	Faint streak (·5) from W.N.W. from 60° alt. to 5° from zenith, drifting towards S.E. and becoming very faint.
8	44	Aurora (1) from about 20° alt. in E.S.E. towards S.E. and curved towards zenith.
8	46	„ disappeared.
8	56	Streaks (1) at short intervals from E.S.E. horizon to 20° towards zenith, and immediately becoming very faint.
8	59	„ disappeared.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *July* 15, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
681	677	697	681	546	337	074	546	683	732	637	812
681	677	695	677	527	309	007	504	656	736	630	832
681	695	703	668	538	238	099	584	637	712	633	843
679	701	703	656	516	182	135	695	647	685	664	861
679	693	697	643	499	158	137	734	666	643	672	869
683	693	708	637	493	128	124	734	664	639	703	897
681	695	693	649	478	174	238	710	691	632	714	875
679	689	699	633	442	071	342	710	706	632	732	901
679	697	697	643	386	067	452	706	708	630	716	956
681	697	697	649	418	088	437	728	710	626	706	948
681	697	689	614	401	053	484	734	710	630	706	972
681	695	693	565	359	012	523	708	710	633	777	994

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 20	1 27	1 33	1 25	1 52	3 15	4 53	0 36	1 14	1 15	1 10	1 11
1 21	1 29	1 35	1 36	2 7	3 34	3 56	1 30	1 14	1 24	1 15	1 10
1 21	1 18	1 29	1 42	2 10	3 55	3 44	1 36	1 20	1 24	1 14	1 17
1 22	1 20	1 32	1 39	2 12	4 17	4 8	1 32	1 24	1 21	1 20	1 17
1 22	1 26	1 34	1 44	2 15	3 50	3 1	1 38	1 16	1 24	1 21	1 20
1 22	1 28	1 33	1 40	2 32	4 3	3 8	1 42	1 20	1 19	1 24	1 21
1 23	1 30	1 35	1 42	2 47	4 47	2 51	1 44	1 16	1 16	1 19	1 32
1 25	1 31	1 38	1 43	2 49	4 1	2 32	1 46	1 19	1 12	1 14	1 34
1 24	1 30	1 36	1 51	2 58	4 0	2 31	1 16	1 10	1 13	1 6	1 48
1 23	1 30	1 34	2 0	3 1	4 23	2 31	1 15	1 8	1 12	1 14	1 47
1 18	1 31	1 34	1 39	2 55	3 38	2 3	1 38	1 8	1 11	1 12	1 47
1 24	1 33	1 33	1 46	3 6	4 39	1 47	1 26	1 9	1 10	1 18	2 7

Vertical Intensity.

79	80	81	79	79	87	89	71	78	74	76	77
79	79	80	79	82	94	69	68	77	74	76	75
79	79	80	81	82	94	71	70	77	74	77	75
79	80	79	79	83	97	81	72	76	75	76	75
79	80	80	79	84	87	79	71	76	76	78	75
79	80	79	79	84	90	69	72	76	76	77	73
79	80	81	79	80	98	57	72	74	77	79	69
79	81	79	80	84	86	57	74	74	76	79	72
80	79	79	81	90	91	53	74	73	76	81	70
80	79	78	76	90	81	53	75	73	75	81	73
80	81	79	77	86	94	58	76	73	75	79	76
80	79	78	78	90	77	63	77	74	76	79	70

August 1, 1883. $\phi = +62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	855	662	658	697	708	710	681	670	710	620	599	035
5	804	708	670	751	691	714	699	674	722	616	643	104
10	782	676	693	730	641	561	730	695	689	632	589	189
15	779	660	666	751	−143	712	689	697	693	635	578	302
20	718	654	681	771	280	865	664	683	685	605	565	274
25	714	635	697	728	467	824	672	687	681	24	028	270
30	632	612	662	732	670	792	660	693	660	641	−103	375
35	630	597	635	738	647	749	664	701	641	653	−121	364
40	618	626	628	741	728	741	685	697	632	626	009	379
45	620	660	616	726	771	716	679	705	624	582	030	412
50	626	647	632	734	645	712	662	726	618	553	009	467
55	641	643	683	712	683	695	670	736	641	586	033	542

Declination. 38° +

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	2 13	2 12	1 58	2 18	2 0	0 36	1 42	2 14	2 20	2 0	1 54	4 28
5	1 57	2 20	2 10	2 4	1 57	1 38	1 43	2 4	2 10	1 57	1 38	3 44
10	2 3	2 15	2 14	2 9	1 45	1 13	1 41	2 1	2 6	1 53	1 22	3 22
15	1 53	2 32	2 10	2 4	3 52	0 13	1 57	2 4	2 5	1 54	1 29	1 38
20	1 43	2 36	2 5	1 54	0 57	0 1	1 59	2 10	2 2	1 56	1 45	2 54
25	2 18	2 33	1 58	2 8	−0 48	0 36	2 8	2 17	2 4	1 57	5 4	4 2
30	2 15	2 26	2 2	2 0	0 16	1 2	2 6	2 18	2 6	1 44	3 19	2 51
35	2 32	2 8	1 54	1 56	0 2	1 35	2 12	2 13	1 58	1 38	3 13	3 32
40	2 20	1 52	1 54	1 54	0 55	1 41	2 14	2 7	2 5	1 40	2 37	3 33
45	2 16	2 0	1 54	1 48	1 0	1 48	2 19	2 13	2 2	1 51	1 45	3 22
50	2 28	2 8	1 55	1 58	0 40	1 51	2 23	2 12	2 2	2 24	3 5	3 22
55	2 34	2 2	2 11	1 54	0 24	1 48	2 23	2 18	2 14	1 59	3 48	3 24

Vertical Intensity. 0·6100 (C.G.S.) +

0	60	45	52	51	64	31	56	62	71	77	86	113
5	49	48	54	51	65	22	59	68	70	79	85	124
10	51	46	55	53	64	40	60	64	69	85	92	129
15	49	46	55	53	89	64	62	66	71	84	100	116
20	47	46	54	51	33	52	65	68	74	88	110	92
25	50	46	54	53	27	53	67	69	76	91	68	111
30	42	45	54	54	37	51	67	69	74	89	85	103
35	45	45	54	56	54	51	68	70	76	85	90	93
40	46	48	53	58	64	51	68	70	80	85	114	101
45	44	52	52	59	45	51	67	69	82	87	94	101
50	49	50	51	62	35	55	66	68	80	90	92	101
55	48	49	50	63	47	56	63	72	76	86	94	103

Auroral Observations.

None.

$\lambda = -115° 43' 50'' = -7$h. 42m. 55s. Göttingen Mean Time. *August* 1, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
544	730	620	699	517	274	454	653	701	695	771	779
546	728	612	703	510	302	454	653	697	703	757	804
534	749	656	718	551	283	502	651	687	672	777	845
612	759	676	698	555	377	527	637	703	681	812	843
624	743	706	706	510	437	517	658	703	722	804	869
628	687	695	712	457	454	519	668	703	743	824	822
630	664	674	722	452	398	595	668	683	714	820	810
653	643	679	706	495	414	607	670	666	706	802	784
658	635	703	647	540	444	628	645	689	703	826	786
685	591	701	643	517	469	630	632	726	738	818	798
693	570	706	609	472	472	635	649	705	775	810	777
724	597	703	565	431	476	645	687	695	773	808	782

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 49	2 29	2 52	2 56	3 4	3 56	3 46	2 6	2 6	2 40	2 26	2 21
2 32	2 32	3 2	2 56	3 14	4 6	3 36	2 11	2 6	2 42	2 28	2 22
2 47	2 20	2 39	3 0	3 12	4 35	3 22	2 16	2 7	2 32	2 30	1 55
2 39	2 4	2 32	2 55	3 6	3 36	3 7	2 20	2 4	2 23	2 26	1 48
2 24	1 45	2 21	2 49	3 15	3 29	2 48	2 18	2 7	2 29	2 26	1 53
2 27	1 51	2 15	2 44	3 16	3 10	2 38	2 22	2 10	2 33	2 22	2 3
2 26	1 47	2 20	2 42	3 54	3 32	2 34	2 17	2 14	2 24	2 33	2 8
2 28	1 52	2 42	2 42	3 33	3 59	2 33	2 14	2 30	2 26	2 23	1 55
2 22	2 7	2 46	2 40	3 15	3 44	2 31	2 14	2 39	2 38	2 22	2 13
2 37	2 26	2 53	2 38	3 35	3 54	2 26	2 22	2 46	2 42	2 17	2 13
2 35	2 50	2 56	2 39	4 20	3 44	2 17	2 23	2 46	2 35	2 8	2 13
2 31	3 8	2 55	2 45	4 36	4 3	2 8	2 12	2 36	2 28	2 12	2 20

Vertical Intensity.

108	85	104	101	108	106	88	79	80	82	85	93
112	88	108	100	111	99	81	77	81	82	86	88
111	84	111	100	112	103	77	77	80	83	87	87
105	85	110	100	114	95	77	75	82	83	87	85
94	89	113	100	116	94	78	76	82	80	88	88
93	91	113	101	114	92	79	75	82	81	90	90
92	89	107	100	112	101	77	75	82	84	91	90
89	86	104	98	115	104	78	78	81	87	89	87
89	84	104	98	112	95	78	79	79	88	85	88
85	86	104	99	108	103	77	80	76	87	85	86
84	90	102	105	126	86	77	78	79	85	89	85
85	97	100	107	129	86	77	79	81	85	90	82

August 15, 1883. $\varphi = +\ 62^\circ\ 38'\ 52''$.

Horizontal Intensity. 0·07000 (C.G.S.) +

Minutes.	Midnight.	1 a.m.	2	3	4	5	6	7	8	9	10	11
0	867	966	808	718	714	755	767	718	691	703	701	755
5	932	966	788	718	724	751	769	724	695	695	701	738
10	940	988	767	708	734	749	755	720	687	695	703	697
15	865	994	741	716	759	745	759	730	703	699	705	718
20	853	998	745	722	757	749	743	726	712	703	705	751
25	824	996	738	730	773	751	751	724	703	706	734	757
30	810	1,033	738	706	769	732	747	714	691	703	720	732
35	804	990	726	691	773	759	743	720	695	701	777	743
40	794	919	714	703	802	757	745	718	697	703	771	728
45	843	899	726	691	780	767	738	722	699	705	755	703
50	897	863	708	693	777	759	720	705	701	703	751	691
55	952	832	720	706	763	763	728	699	708	703	743	672

Declination. 39°+

	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0	0 35	0 48	0 59	1 3	1 7	1 4	1 10	1 17	1 12	1 18	1 18	1 5
5	0 31	0 50	1 2	1 2	1 2	1 8	1 8	1 15	1 11	1 17	1 17	1 8
10	1 4	0 47	1 3	1 3	1 1	1 8	1 9	1 15	1 10	1 17	1 18	1 18
15	1 6	0 52	1 8	1 3	0 55	1 12	1 4	1 13	1 11	1 16	1 18	1 9
20	1 2	0 49	1 6	1 3	0 56	1 16	1 8	1 11	1 13	1 17	1 18	1 1
25	1 0	0 48	1 5	1 8	0 58	1 23	1 10	1 10	1 16	1 18	1 14	0 50
30	0 48	0 52	1 4	1 10	0 58	1 22	1 6	1 10	1 15	1 16	1 16	0 54
35	0 58	0 55	1 6	1 12	0 59	1 22	1 6	1 10	1 12	1 16	1 4	1 0
40	0 49	1 3	1 6	1 9	1 2	1 16	1 7	1 10	1 14	1 18	0 59	1 11
45	0 42	0 56	1 4	1 11	1 6	1 14	1 10	1 11	1 13	1 14	1 0	1 21
50	0 44	0 53	1 4	1 10	1 6	1 14	1 11	1 11	1 14	1 16	1 6	1 23
55	0 54	0 58	1 4	1 7	1 7	1 9	1 14	1 13	1 6	1 18	1 4	1 18

Vertical Intensity. 0·6100 (C.G.S.) +

0	76	61	74	75	75	68	70	70	73	74	74	73
5	69	63	75	75	75	70	71	73	73	74	74	71
10	67	65	74	75	73	68	71	73	73	73	73	73
15	67	69	74	75	74	69	71	73	73	74	74	73
20	69	68	74	75	74	70	71	73	73	74	74	73
25	71	68	74	79	74	71	71	73	74	74	73	74
30	70	66	74	79	70	70	71	73	75	74	74	76
35	73	67	74	74	70	69	72	73	74	73	70	75
40	73	71	74	75	68	69	73	73	75	74	73	77
45	72	71	74	75	70	69	74	73	74	73	71	77
50	68	73	74	74	68	70	73	73	75	73	71	77
55	56	73	75	75	68	70	73	73	74	73	73	76

Auroral Observations.

None.

$\lambda = -115° 43' 50'' = -7h. 42m. 55s.$ Göttingen Mean Time. *August* 15, 1883.

Horizontal Intensity.

Noon.	1	2	3	4	5	6	7	8	9	10	11
708	714	712	706	706	693	687	681	676	677	681	685
732	710	726	693	699	695	681	681	672	674	681	679
730	720	726	691	697	695	683	676	685	676	676	677
714	708	710	705	697	693	683	677	681	679	687	683
708	706	693	703	689	693	681	676	683	681	681	687
705	705	706	705	693	691	685	677	679	681	681	689
695	708	718	695	699	691	679	677	676	679	691	683
734	718	701	697	703	687	685	677	674	681	681	683
710	726	699	701	703	689	681	677	672	679	685	683
701	730	705	706	705	689	677	676	679	685	681	687
693	736	705	701	699	687	681	679	677	697	685	687
714	722	705	706	687	683	679	676	683	687	685	689

Declination.

° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 18	1 28	1 30	1 41	1 40	1 35	1 23	1 10	1 9	1 9	1 11	1 14
1 16	1 30	1 29	1 46	1 38	1 33	1 24	1 13	1 11	1 8	1 11	1 12
1 14	1 29	1 30	1 42	1 37	1 32	1 22	1 15	1 10	1 9	1 10	1 12
1 16	1 31	1 35	1 37	1 37	1 30	1 20	1 12	1 12	1 9	1 13	1 12
1 23	1 34	1 40	1 39	1 35	1 28	1 21	1 12	1 10	1 8	1 14	1 12
1 24	1 37	1 38	1 38	1 38	1 22	1 18	1 11	1 10	1 9	1 12	1 13
1 28	1 36	1 36	1 38	1 36	1 29	1 20	1 10	1 10	1 10	1 14	1 14
1 14	1 34	1 39	1 38	1 36	1 29	1 17	1 10	1 11	1 8	1 15	1 14
1 24	1 29	1 40	1 39	1 35	1 28	1 17	1 10	1 12	1 9	1 13	1 14
1 25	1 26	1 40	1 40	1 35	1 26	1 16	1 10	1 10	1 12	1 14	1 14
1 32	1 22	1 41	1 41	1 37	1 26	1 13	1 11	1 12	1 11	1 14	1 14
1 29	1 26	1 40	1 39	1 36	1 24	1 12	1 11	1 12	1 12	1 14	1 14

Vertical Intensity.

75	75	76	75	74	74	75	75	75	75	75	75
76	76	77	74	74	74	75	74	75	75	74	74
75	76	77	73	74	74	74	75	76	75	76	73
77	76	77	74	74	74	75	75	75	74	75	74
76	77	77	74	74	74	75	75	75	74	75	74
76	76	76	75	74	74	75	75	76	74	75	74
76	76	76	74	74	74	75	75	75	74	74	74
75	76	75	74	74	74	76	75	75	74	75	74
76	76	75	74	74	74	75	75	75	74	74	74
76	76	75	74	75	75	74	75	75	75	75	74
76	76	75	74	74	75	75	75	74	75	75	74
75	76	74	73	74	75	74	75	74	75	74	74

40° + Readings of Declinometer at 20 second intervals.

Commencing the 15th day of *September* 1882, at 3 p.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	51	9	40	50	19	20	48	29	0	49	38	40	51	48	20	51
	20	51	10	0	50		40	48		20	50	39	0	51		40	51
	40	51		20	50	20	0	48		40	51		20	51	49	0	50
1	0	51		40	50		20	48	30	0	51		40	50		20	52
	20	50	11	0	50		40	48		20	50	40	0	49		40	52
	40	50		20	50	21	0	47		40	50		20	48	50	0	52
2	0	50		40	50		20	47	31	0	50		40	50		20	50
	20	51	12	0	50		40	47		20	50	41	0	49		40	51
	40	50		20	50	22	0	47		40	50		20	48	51	0	50
3	0	51		40	49		20	46	32	0	50		40	48		20	49
	20	51	13	0	49		40	46		20	49	42	0	48		40	49
	40	50		20	48	23	0	46		40	49		20	48	52	0	48
4	0	51		40	48		20	47	33	0	49		40	50		20	49
	20	52	14	0	48		40	47		20	50	43	0	50		40	50
	40	52		20	48	24	0	47		40	50		20	50	53	0	50
5	0	52		40	48		20	47	34	0	50		40	52		20	50
	20	52	15	0	48		40	46		20	49	44	0	52		40	50
	40	51		20	48	25	0	46		40	50		20	52	54	0	50
6	0	50		40	48		20	46	35	0	50		40	52		20	49
	20	50	16	0	48		40	46		20	49	45	0	53		40	48
	40	50		20	49	26	0	46		40	49		20	52	55	0	47
7	0	50		40	48		20	47	36	0	51		40	52		20	46
	20	50	17	0	47		40	48		20	50	46	0	52		40	45
	40	50		20	47	27	0	49		40	50		20	53	56	0	46
8	0	50		40	47		20	49	37	0	50		40	50		20	47
	20	50	18	0	47		40	49		20	49	47	0	51			
	40	51		20	48	28	0	49		40	49		20	50			
9	0	50		40	48		20	49	38	0	49		40	50			
	20	50	19	0	48		40	49		20	50	48	0	51			

40° + Commencing the 1st day of *October* 1882, at 4 p.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	44	6	40	46	13	20	46	20	0	44	26	40	43	33	20	44
	20	43	7	0	45		40	46		20	44	27	0	43		40	44
	40	43		20	45	14	0	46		40	44		20	43	34	0	44
1	0	42		40	46		20	46	21	0	44		40	43		20	44
	20	41	8	0	46		40	46		20	44	28	0	43		40	43
	40	41		20	46	15	0	46		40	44		20	42	35	0	44
2	0	42		40	47		20	46	22	0	44		40	43		20	44
	20	42	9	0	46		40	46		20	44	29	0	43		40	44
	40	43		20	47	16	0	47		40	44		20	43	36	0	45
3	0	44		40	46		20	47	23	0	44		40	43		20	44
	20	45	10	0	46		40	47		20	43	30	0	43		40	44
	40	44		20	46	17	0	48		40	44		20	44	37	0	44
4	0	43		40	45		20	48	24	0	44		40	44		20	44
	20	42	11	0	46		40	48		20	43	31	0	44		40	44
	40	42		20	46	18	0	47		40	43		20	44	38	0	44
5	0	42		40	46		20	46	25	0	44		40	44		20	43
	20	43	12	0	47		40	46		20	44	32	0	45		40	43
	40	44		20	46	19	0	44		40	43		20	44	39	0	43
6	0	45		40	46		20	44	26	0	43		40	44		20	42
	20	45	13	0	46		40	44		20	43	33	0	44		40	41

40° + Readings of Declinometer at 20 second intervals.

Commencing the 15th day of *October* 1882, at 5 p.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′
0	0	1 27	10	0	2 4	20	0	1 5	30	0	0 47	40	0	0 43	50	0	0 31
	20	1 27		20	2 0		20	1 5		20	0 45		20	0 43		20	0 31
	40	1 28		40	1 56		40	1 3		40	0 42		40	0 46		40	0 32
1	0	1 28	11	0	1 52	21	0	1 1	31	0	0 42	41	0	0 49	51	0	0 32
	20	1 27		20	1 46		20	0 57		20	0 40		20	0 52		20	0 32
	40	1 24		40	1 43		40	0 56		40	0 40		40	0 55		40	0 32
2	0	1 21	12	0	1 40	22	0	0 55	32	0	0 39	42	0	0 57	52	0	0 33
	20	1 20		20	1 36		20	0 53		20	0 39		20	0 57		20	0 33
	40	1 22		40	1 33		40	0 54		40	0 39		40	0 57		40	0 34
3	0	1 22	13	0	1 30	23	0	0 54	33	0	0 38	43	0	0 55	53	0	0 35
	20	1 23		20	1 29		20	0 52		20	0 38		20	0 53		20	0 36
	40	1 26		40	1 30		40	0 51		40	0 40		40	0 50		40	0 36
4	0	1 28	14	0	1 29	24	0	0 50	34	0	0 42	44	0	0 47	54	0	0 38
	20	1 32		20	1 28		20	0 49		20	0 42		20	0 45		20	0 40
	40	1 35		40	1 26		40	0 50		40	0 42		40	0 42		40	0 39
5	0	1 40	15	0	1 26	25	0	0 49	35	0	0 41	45	0	0 41	55	0	0 38
	20	1 43		20	1 26		20	0 50		20	0 41		20	0 39		20	0 38
	40	1 53		40	1 25		40	0 49		40	0 40		40	0 37		40	0 38
6	0	2 0	16	0	1 20	26	0	0 48	36	0	0 38	46	0	0 36	56	0	0 37
	20	2 6		20	1 18		20	0 48		20	0 38		20	0 34		20	0 36
	40	2 12		40	1 16		40	0 48		40	0 39		40	0 31		40	0 37
7	0	2 14	17	0	1 16	27	0	0 47	37	0	0 42	47	0	0 31	57	0	0 37
	20	2 17		20	1 14		20	0 47		20	0 44		20	0 30		20	0 40
	40	2 17		40	1 16		40	0 48		40	0 47		40	0 29		40	0 40
8	0	2 14	18	0	1 13	28	0	0 48	38	0	0 48	48	0	0 28	58	0	0 41
	20	2 16		20	1 11		20	0 48		20	0 49		20	0 28		20	0 41
	40	2 13		40	1 18		40	0 50		40	0 49		40	0 28		40	0 39
9	0	2 12	19	0	1 8	29	0	0 50	39	0	0 47	49	0	0 28	59	0	0 38
	20	2 12		20	1 5		20	0 50		20	0 46		20	0 29		20	0 36
	40	2 9		40	1 6		40	0 48		40	0 44		40	0 30		40	0 35

40° + Commencing the 1st day of *November* 1882, at 6 p.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	34	10	0	34	20	0	38	30	0	34	40	0	36	50	0	29
	20	32		20	33		20	37		20	34		20	36		20	27
	40	32		40	33		40	36		40	34		40	36		40	28
1	0	32	11	0	33	21	0	34	31	0	34	41	0	35	51	0	30
	20	33		20	34		20	30		20	34		20	36		20	32
	40	33		40	36		40	28		40	33		40	36		40	32
2	0	34	12	0	36	22	0	24	32	0	33	42	0	35	52	0	31
	20	33		20	36		20	23		20	33		20	34		20	31
	40	33		40	35		40	22		40	32		40	33		40	31
3	0	34	13	0	34	23	0	23	33	0	32	43	0	33	53	0	30
	20	34		20	34		20	24		20	33		20	34		20	29
	40	33		40	33		40	25		40	33		40	32		40	28
4	0	32	14	0	32	24	0	25	34	0	33	44	0	31	54	0	28
	20	34		20	32		20	26		20	34		20	30		20	27
	40	34		40	32		40	25		40	33		40	30		40	25
5	0	35	15	0	32	25	0	25	35	0	33	45	0	30	55	0	24
	20	34		20	32		20	26		20	33		20	31		20	24
	40	33		40	33		40	27		40	33		40	31		40	24
6	0	33	16	0	34	26	0	28	36	0	33	46	0	32	56	0	25
	20	32		20	32		20	28		20	34		20	34		20	25
	40	30		40	30		40	28		40	32		40	34		40	24
7	0	30	17	0	29	27	0	30	37	0	33	47	0	35	57	0	25
	20	30		20	29		20	32		20	33		20	34		20	25
	40	28		40	30		40	34		40	34		40	33		40	24
8	0	27	18	0	32	28	0	34	38	0	34	48	0	35	58	0	24
	20	28		20	34		20	34		20	34		20	36		20	24
	40	30		40	36		40	34		40	34		40	35		40	28
9	0	28	19	0	38	29	0	34	39	0	35	49	0	34	59	0	31
	20	30		20	39		20	34		20	34		20	33		20	35
	40	32		40	39		40	34		40	34		40	31		40	34

40° +

Readings of Declinometer at 20 second intervals.

Commencing the 15th day *November* 1882, at 7 p.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	42	10	0	38	20	0	38	30	0	26	40	0	32	50	0	23
	20	42		20	34		20	37		20	29		20	29		20	22
	40	41		40	32		40	38		40	29		40	26		40	24
1	0	42	11	0	33	21	0	40	31	0	30	41	0	23	51	0	22
	20	44		20	33		20	42		20	29		20	22		20	23
	40	42		40	33		40	42		40	29		40	22		40	26
2	0	38	12	0	34	22	0	39	32	0	28	42	0	21	52	0	28
	20	38		20	35		20	36		20	26		20	21		20	31
	40	40		40	36		40	32		40	26		40	21		40	32
3	0	44	13	0	37	23	0	33	33	0	25	43	0	19	53	0	32
	20	45		20	37		20	36		20	26		20	19		20	34
	40	45		40	36		40	38		40	27		40	20		40	34
4	0	43	14	0	38	24	0	39	34	0	28	44	0	24	54	0	32
	20	40		20	35		20	40		20	30		20	26		20	30
	40	38		40	34		40	39		40	31		40	28		40	29
5	0	36	15	0	32	25	0	40	35	0	35	45	0	27	55	0	30
	20	33		20	33		20	40		20	36		20	27		20	31
	40	32		40	32		40	40		40	36		40	24		40	32
6	0	28	16	0	32	26	0	39	36	0	33	46	0	22	56	0	34
	20	26		20	34		20	39		20	32		20	20		20	34
	40	25		40	34		40	39		40	26		40	18		40	34
7	0	25	17	0	35	27	0	38	37	0	22	47	0	18	57	0	33
	20	28		20	36		20	38		20	20		20	19		20	32
	40	30		40	35		40	35		40	21		40	20		40	28
8	0	36	18	0	35	28	0	33	38	0	25	48	0	21	58	0	26
	20	40		20	34		20	32		20	29		20	24		20	29
	40	44		40	36		40	30		40	32		40	26		40	30
9	0	44	19	0	36	29	0	27	39	0	35	49	0	26	59	0	30
	20	42		20	36		20	25		20	36		20	25		20	30
	40	40		40	36		40	25		40	35		40	24		40	30

40° +

Commencing the 1st day of *December* 1882, at 8 p.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min	Sec.	′	Min.	See.	′	Min	Sec.	′	Min.	Sec.	′
0	0	19	10	0	20	20	0	24	30	0	24	40	0	24	50	0	24
	20	19		20	20		20	24		20	24		20	24		20	23·5
	40	19		40	20		40	24		40	24·5		40	24		40	23·5
1	0	19	11	0	20	21	0	24	31	0	25	41	0	24·5	51	0	23
	20	19		20	20		20	23·5		20	25		20	25		20	23
	40	20		40	20		40	23·5		40	25		40	25·5		40	23
2	0	20	12	0	20	22	0	23·5	32	0	24·5	42	0	25·5	52	0	23
	20	20		20	20		20	23·5		20	24·5		20	25·5		20	23·5
	40	20		40	21		40	23·5		40	24		40	25·5		40	23·5
3	0	20	13	0	21	23	0	23	33	0	24	43	0	25	53	0	23·5
	20	20		20	21		20	23		20	24		20	25		20	24
	40	20		40	21		40	23		40	24		40	25·5		40	24
4	0	20	14	0	21	24	0	22·5	34	0	23·5	44	0	25·5	54	0	24
	20	20		20	22		20	22·5		20	23		20	25·5		20	24
	40	20		40	22		40	22		40	23		40	25·5		40	24
5	0	20	15	0	22	25	0	22	35	0	23	45	0	25	55	0	23·5
	20	20		20	22		20	22		20	23		20	24		20	23
	40	20		40	22		40	22		40	23		40	24		40	23
6	0	20	16	0	22	26	0	22	36	0	23	46	0	23	56	0	23
	20	20		20	22		20	22		20	23		20	22		20	23
	40	20		40	22·3		40	22		40	23·5		40	22		40	23
7	0	20	17	0	23	27	0	22·5	37	0	23·5	47	0	22	57	0	23
	20	20		20	24		20	22·5		20	24		20	22		20	24
	40	20		40	24		40	23		40	24		40	22·5		40	24·5
8	0	20	18	0	24·4	28	0	23	38	0	24	48	0	23·5	58	0	25·5
	20	20		20	25		20	23		20	24		20	23·5		20	26
	40	20		40	25		40	23·5		40	24		40	23·5		40	25·5
9	0	20	19	0	24·5	29	0	23·5	39	0	23·5	49	0	24	59	0	26
	20	20		20	24·5		20	24		20	23·5		20	24		20	26
	40	20		40	24		40	24		40	24		40	24		40	26

40° + Readings of Declinometer at 20 second intervals.

Commencing the 15th day of *December* 1882, at 9 p.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	32	10	0	32	20	0	34	30	0	27	40	0	24	50	0	20
	20	32		20	31		20	34		20	27		20	23		20	21
	40	33		40	29		40	35		40	27		40	23		40	21
1	0	33	11	0	28	21	0	35	31	0	28	41	0	24	51	0	21
	20	33		20	29		20	35		20	27		20	24		20	21
	40	34		40	30		40	33		40	26		40	24		40	21
2	0	35	12	0	30	22	0	33	32	0	26	42	0	23	52	0	22
	20	35		20	31		20	33		20	26		20	24		20	21
	40	32		40	31		40	34		40	26		40	24		40	21
3	0	31	13	0	31	23	0	35	33	0	26	43	0	23	53	0	20
	20	30		20	31		20	35		20	26		20	23		20	20
	40	30		40	31		40	34		40	26		40	23		40	20
4	0	29	14	0	32	24	0	34	34	0	26	44	0	22	54	0	19
	20	29		20	34		20	34		20	26		20	24		20	19
	40	30		40	35		40	34		40	25		40	24		40	18
5	0	30	15	0	37	25	0	33	35	0	26	45	0	26	55	0	18
	20	31		20	37		20	32		20	26		20	25		20	18
	40	32		40	38		40	31		40	25		40	24		40	18
6	0	32	16	0	38	26	0	30	36	0	26	46	0	23	56	0	18
	20	31		20	37		20	29		20	26		20	21		20	16
	40	31		40	36		40	28		40	26		40	23		40	15
7	0	32	17	0	33	27	0	28	37	0	26	47	0	22	57	0	14
	20	32		20	32		20	28		20	26		20	23		20	14
	40	32		40	32		40	28		40	26		40	24		40	14
8	0	33	18	0	31	28	0	28	38	0	25	48	0	24	58	0	14
	20	33		20	32		20	28		20	25		20	23		20	14
	40	34		40	32		40	28		40	25		40	23		40	14
9	0	33	19	0	32	29	0	28	39	0	24	49	0	22	59	0	14
	20	33		20	33		20	27		20	24		20	22		20	15
	40	32		40	33		40	28		40	24		40	22		40	14

40° + Commencing the 2nd day of *January* 1883, at 10 p.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	8	10	0	12	20	0	12	30	0	23	40	0	21	50	0	18
	20	14		20	10		20	12		20	21		20	20		20	17·5
	40	12		40	11		40	10		40	20		40	19·5		40	17
1	0	12·5	11	0	10·5	21	0	10	31	0	18	41	0	19·5	51	0	16
	20	12·5		20	11		20	8		20	16		20	19·8		20	16
	40	13		40	10		40	10		40	16		40	19·5		40	16
2	0	11·5	12	0	10	22	0	10	32	0	16	42	0	18	52	0	15
	20	11		20	9·5		20	9·5		20	16		20	16·5		20	15
	40	10·5		40	9·5		40	8		40	15·5		40	16		40	16
3	0	10·5	13	0	8	23	0	8	33	0	15·5	43	0	16·5	53	0	16
	20	9·5		20	9		20	7		20	11		20	18		20	16
	40	11		40	8·5		40	8		40	15		40	17		40	16
4	0	10	14	0	9	24	0	8	34	0	16	44	0	17	54	0	18
	20	10		20	11		20	8		20	15·5		20	16		20	17·5
	40	9·5		40	10		40	7·5		40	14·5		40	16		40	18
5	0	10	15	0	10	25	0	6	35	0	15·5	45	0	18	55	0	18
	20	9		20	9		20	7		20	14		20	18		20	19·5
	40	8·5		40	9·5		40	8·5		40	14·5		40	16·5		40	19·5
6	0	8	16	0	11·5	26	0	8·5	36	0	16	46	0	16	56	0	18·5
	20	8		20	10		20	9·5		20	16		20	17		20	18
	40	7		40	11		40	13		40	17·5		40	18		40	18
7	0	7·5	17	0	10	27	0	14·5	37	0	16	47	0	17	57	0	20
	20	6		20	12		20	15·5		20	18		20	16		20	20
	40	7·5		40	10		40	16		40	18		40	17·5		40	20
8	0	7·5	18	0	12	28	0	18	38	0	17	48	0	18	58	0	19·5
	20	8		20	12		20	20		20	17·5		20	18·5		20	19·5
	40	9		40	12		40	20		40	19·5		40	18		40	17
9	0	8·5	19	0	12	29	0	22	39	0	20·5	49	0	17	59	0	17·5
	20	10		20	12		20	21		20	20		20	18		20	18
	40	9		40	12		40	21		40	19·5		40	18·5		40	17

39° +

Readings of Declinometer at 20 second intervals.

Commencing the 15th day of *January* 1883, at 11 p.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′
0	0	1 4·0	10	0	1 5·0	20	0	1 8·0	30	0	0 59·0	40	0	1 14·0	50	0	1 11·0
	20	1 3·0		20	1 6·0		20	1 6·0		20	1 1·0		20	1 15·8		20	1 12·0
	40	1 2·3		40	1 5·8		40	1 7·5		40	1 1·3		40	1 15·5		40	1 11·8
1	0	1 1·3	11	0	1 6·5	21	0	1 8·3	31	0	1 2·5	41	0	1 14·0	51	0	1 11·0
	20	1 0·0		20	1 6·5		20	1 8·0		20	1 4·0		20	1 15·0		20	1 9·5
	40	0 59·8		40	1 7·0		40	1 8·0		40	1 5·0		40	1 14·0		40	1 8·0
2	0	1 0·0	12	0	1 8·0	22	0	1 8·0	32	0	1 4·8	42	0	1 17·0	52	0	1 7·5
	20	1 0·0		20	1 8·3		20	1 7·8		20	1 5·5		20	1 17·3		20	1 8·0
	40	0 59·5		40	1 9·0		40	1 7·0		40	1 6·0		40	1 15·5		40	1 9·0
3	0	0 59·0	13	0	1 9·5	23	0	1 2·0	33	0	1 7·5	43	0	1 14·0	53	0	1 15·0
	20	0 58·5		20	1 9·0		20	1 0·0		20	1 7·8		20	1 13·5		20	1 14·0
	40	0 58·3		40	1 8·0		40	0 59·3		40	1 7·5		40	1 13·5		40	1 8·5
4	0	0 58·0	14	0	1 7·8	24	0	0 57·5	34	0	1 7·8	44	0	1 13·0	54	0	1 10·0
	20	0 58·5		20	1 7·0		20	0 56·8		20	1 9·0		20	1 14·0		20	1 11·0
	40	0 59·0		40	1 7·0		40	0 57·3		40	1 10·0		40	1 14·3		40	1 12·0
5	0	1 0·0	15	0	1 7·3	25	0	0 57·8	35	0	1 11·0	45	0	1 14·0	55	0	1 16
	20	1 0·3		20	1 7·0		20	1 0·0		20	1 10·5		20	1 15·0		20	1 18
	40	1 0·3		40	1 7·3		40	0 58·0		40	1 11·0		40	1 12·0		40	1 14
6	0	1 0·0	16	0	1 7·0	26	0	0 59·0	36	0	1 11·5	46	0	1 12·3	56	0	1 12
	20	1 1·0		20	1 7·8		20	1 0·0		20	1 11·3		20	1 12·0		20	1 13
	40	1 1·5		40	1 7·5		40	0 57·0		40	1 10·0		40	1 12·0		40	1 13·5
7	0	1 0·8	17	0	1 7·8	27	0	0 55·0	37	0	1 10·3	47	0	1 12·3	57	0	1 14
	20	1 2·0		20	1 6·8		20	0 53·5		20	1 11·0		20	1 10·0		20	1 14
	40	1 2·2		40	1 6·8		40	0 54·0		40	1 13·0		40	1 11·0		40	1 13
8	0	1 2·0	18	0	1 7·0	28	0	0 55·0	38	0	1 12·5	48	0	1 0·0	58	0	1 14
	20	1 3·0		20	1 6·8		20	0 54·0		20	1 12·0		20	1 11·0		20	1 15
	40	1 3·5		40	1 7·0		40	0 55·8		40	1 11·3		40	1 13·0		40	1 14
9	0	1 4·3	19	0	1 7·0	29	0	0 57·8	39	0	1 12·0	49	0	1 13·5	59	0	1 13
	20	1 5·3		20	1 6·0		20	0 58·0		20	1 13·3		20	1 12·0		20	1 14
	40	1 5·0		40	1 7·0		40	0 58·3		40	1 12·5		40	1 10·0		40	1 14

39° +

Commencing the 1st day of *February* 1883, at Midnight, Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′
0	0		10	0	0 57·5	20	0	0 59·8	30	0	1 0·0	40	0	0 57·3	50	0	1 0·0
	20	1 0		20	0 57·5		20	1 0·0		20	1 0·0		20	0 57·8		20	1 0·2
	40	0 58		40	0 57·5		40	1 0·0		40	0 59·5		40	0 58·0		40	1 0·5
1	0	0 58	11	0	0 57·5	21	0	1 0·0	31	0	0 59·0	41	0	0 58·3	51	0	1 0·0
	20	0 58		20	0 57·5		20	1 0·3		20	0 58·5		20	0 59·5		20	0 59·8
	40	0 58·5		40	0 57·5		40	1 0·5		40	0 59·0		40	1 0·0		40	0 59·5
2	0	0 59	12	0	0 57·5	22	0	1 1·5	32	0	0 59·0	42	0	1 0·0	52	0	0 59·0
	20	0 59·5		20	0 57·5		20	1 2·0		20	1 0·0		20	0 59·5		20	0 59·8
	40	0 59·5		40	0 57·5		40	1 1·5		40	1 0·3		40	0 59·0		40	1 0·1
3	0	0 59	13	0	0 57	23	0	1 1·5	33	0	1 0·0	43	0	0 58·5	53	0	1 0·5
	20	0 59		20	0 57		20	1 1·5		20	1 0·0		20	0 58·0		20	1 1·0
	40	0 59		40	0 56·5		40	1 1·8		40	0 59·8		40	0 57·8		40	1 1·0
4	0	0 58·5	14	0	0 56·5	24	0	1 2·0	34	0	0 59·0	44	0	0 58·0	54	0	1 0·0
	20	0 58		20	0 56·5		20	1 2		20	0 58·0		20	0 58·5		20	1 0·0
	40	0 58		40	0 56·5		40	1 2		40	0 57·8		40	0 58·5		40	1 0·0
5	0	0 57·5	15	0	0 57	25	0	1 2·3	35	0	0 57·0	45	0	0 59·0	55	0	1 0·2
	20	0 57·5		20	0 57		20	1 2·5		20	0 56·5		20	0 59·5		20	1 0·5
	40	0 57·5		40	0 57		40	1 2·5		40	0 56·5		40	0 59·8		40	1 0·5
6	0	0 58	16	0	0 57·8	26	0	1 2	36	0	0 56·5	46	0	1 0·0	56	0	1 0·5
	20	0 58		20	0 58		20	1 2		20	0 56·5		20	1 0·5		20	1 1·0
	40	0 58·5		40	0 58·2		40	1 2		40	0 56·5		40	1 0·5		40	1 1·5
7	0	0 58·5	17	0	0 58·5	27	0	1 1·5	37	0	0 57·0	47	0	1 0·0	57	0	1 1·8
	20	0 58·5		20	0 59		20	1 1·0		20	0 56·8		20	0 59·8		20	1 2·0
	40	0 58		40	0 59		40	1 1·0		40	0 56·5		40	0 59·5		40	1 1·8
8	0	0 58	18	0	0 59·8	28	0	1 1·0	38	0	0 56·5	48	0	0 58·5	58	0	1 1·8
	20	0 58		20	1 0·0		20	1 1·3		20	0 56·0		20	0 59·0		20	1 1·5
	40	0 58		40	1 0·0		40	1 1·5		40	0 56·0		40	0 59·0		40	1 1·0
9	0	0 58	19	0	1 0·0	29	0	1 1·5	39	0	0 56·3	49	0	0 59·3	59	0	1 1·0
	20	0 58		20	0 59·8		20	1 1·0		20	0 56·3		20	0 59·8		20	1 1·5
	40	0 58		40	0 59·8		40	1 0·5		40	0 57·0		40	0 59·8		40	1 1·0

40°+ Readings of Declinometer at 20 second intervals.

Commencing the 15th day of *February* 1883, at 1 a.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	12·5	10	0	8·5	20	0	9·8	30	0	13·5	40	0	17·5	50	0	14·5
	20	12·0		20	8·5		20	10·0		20	13·8		20	17·3		20	14·5
	40	11·8		40	8·5		40	10·3		40	14·0		40	17·3		40	14·5
1	0	11·8	11	0	8·8	21	0	10·5	31	0	14·2	41	0	17·3	51	0	14·3
	20	12·0		20	9·0		20	11·5		20	15·2		20	17·0		20	14·0
	40	12·0		40	9·8		40	11·8		40	15·8		40	17·0		40	14·0
2	0	12·0	12	0	9·8	22	0	12·0	32	0	16·0	42	0	17·0	52	0	14·0
	20	12·0		20	9·8		20	12·0		20	16·5		20	17·0		20	14·0
	40	11·8		40	10·0		40	12·0		40	17·0		40	17·5		40	14·5
3	0	11·5	13	0	10·3	23	0	13·0	33	0	17·5	43	0	17·5	53	0	14·5
	20	11·0		20	10·3		20	12·5		20	17·8		20	17·5		20	15·0
	40	10·5		40	10·5		40	13·3		40	18·0		40	17·5		40	15·5
4	0	10·3	14	0	10·3	24	0	12·0	34	0	18·0	44	0	17·5	54	0	15·5
	20	10·0		20	10·3		20	13·0		20	17·8		20	17·8		20	15·8
	40	10·0		40	10·5		40	13·5		40	17·5		40	17·5		40	15·8
5	0	10·0	15	0	10·5	25	0	13·8	35	0	17·8	45	0	17·5	55	0	15·8
	20	10·3		20	10·5		20	13·8		20	17·8		20	17·0		20	15·8
	40	10·3		40	10·5		40	14·0		40	17·8		40	17·0		40	15·8
6	0	10·0	16	0	10·8	26	0	14·0	36	0	17·5	46	0	16·5	56	0	15·8
	20	10·0		20	10·5		20	14·0		20	17·5		20	16·3		20	16·0
	40	9·8		40	10·0		40	14·0		40	17·5		40	16·0		40	16·0
7	0	9·5	17	0	10·0	27	0	13·8	37	0	17·5	47	0	15·8	57	0	15·8
	20	9·5		20	10·0		20	13·5		20	17·5		20	15·5		20	15·8
	40	9·5		40	9·8		40	13·5		40	17·5		40	15·0		40	15·5
8	0	9·5	18	0	9·8	28	0	13·0	38	0	17·8	48	0	14·5	58	0	15·5
	20	9·8		20	10·0		20	12·8		20	18·0		20	14·3		20	15·0
	40	9·5		40	10·0		40	12·8		40	18·0		40	14·3		40	15·0
9	0	9·0	19	0	9·8	29	0	13·0	39	0	17·8	49	0	14·0	59	0	15·0
	20	8·5		20	9·8		20	13·0		20	17·8		20	14·0		20	15·0
	40	8·5		40	9·8		40	13·2		40	17·5		40	14·3		40	14·5

40°+ Commencing the 1st day of *March* 1883, at 2 a.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	12·0	10	0	12·0	20	0	8·8	30	0	8·0	40	0	18·0	50	0	19·0
	20	12·0		20	12·0		20	8·5		20	9·5		20	20·0		20	19·5
	40	11·0		40	11·5		40	9·0		40	10·0		40	19·5		40	20·0
1	0	9·0	11	0	11·8	21	0	8·0	31	0	11·0	41	0	17·0	51	0	20·0
	20	7·8		20	10·5		20	6·0		20	9·8		20	20·0		20	20·1
	40	7·0		40	10·3		40	4·0		40	9·5		40	22·0		40	20·3
2	0	6·5	12	0	12·0	22	0	4·0	32	0	8·5	42	0	22·0	52	0	20·5
	20	5·0		20	12·0		20	6·0		20	9·0		20	22·3		20	22·0
	40	4·0		40	11·8		40	6·5		40	10.0		40	21·0		40	22·3
3	0	5·0	13	0	10·3	23	0	5·0	33	0	13·0	43	0	19·5	53	0	22·0
	20	5·0		20	10·0		20	5·8		20	17·0		20	21·8		20	21·0
	40	5·5		40	9·5		40	4·3		40	19·0		40	22·0		40	20·0
4	0	7·5	14	0	8·0	24	0	2·0	34	0	20·0	44	0	22·0	54	0	18·5
	20	9·0		20	8·1		20	1·3		20	20·5		20	22·0		20	17·8
	40	10·0		40	8·3		40	2·0		40	17·0		40	22·0		40	17·0
5	0	9·8	15	0	9·5	25	0	1·8	35	0	14·0	45	0	20·0	55	0	18·0
	20	10·3		20	10·5		20	2·0		20	12·0		20	19·0		20	19·5
	40	11·0		40	10·1		40	2·0		40	12·0		40	19·0		40	20·0
6	0	10·3	16	0	11·3	26	0	2·0	36	0	10·5	46	0	20·0	56	0	20·0
	20	10·0		20	12·0		20	3·8		20	8·5		20	20·0		20	20·0
	40	10·8		40	12·5		40	3·0		40	10·0		40	20·0		40	20·0
7	0	12·0	17	0	13·0	27	0	3·0	37	0	12·0	47	0	20·0	57	0	21·0
	20	11·0		20	11·0		20	3·5		20	16·0		20	20·0		20	23·5
	40	11·5		40	10·8		40	7·0		40	16·0		40	19·0		40	24·0
8	0	13·0	18	0	10·5	28	0	12·0	38	0	17·0	48	0	18·0	58	0	23·0
	20	14·5		20	9·8		20	12·0		20	18·0		20	18·1		20	22·0
	40	14·1		40	8·5		40	12·3		40	17·8		40	19·0		40	21·0
9	0	14·0	19	0	8·0	29	0	12·0	39	0	15·0	49	0	19·5	59	0	21·0
	20	14·0		20	9·0		20	10·5		20	12·0		20	20·0		20	19·5
	40	13·8		40	9·8		40	8·0		40	14·0		40	19·0		40	18·5

40° + Readings of Declinometer at 20 second intervals.

Commencing the 15th day of *March* 1883, at 3 a.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	12·0	10	0	10·5	20	0	11·0	30	0	8·3	40	0	5·0	50	0	5·8
	20	12·3		20	10·0		20	9·0		20	8·0		20	5·5		20	6·0
	40	12·0		40	10·0		40	8·0		40	8·0		40	5·5		40	6·2
1	0	12·0	11	0	10·0	21	0	6·5	31	0	7·8	41	0	5·0	51	0	6·5
	20	11·8		20	10·0		20	5·0		20	7·5		20	5·0		20	7·0
	40	10·5		40	10·5		40	4·5		40	7·0		40	5·5		40	7·0
2	0	10·3	12	0	10·5	22	0	6·0	32	0	6·8	42	0	5·8	52	0	7·5
	20	10·0		20	10·0		20	6·5		20	6·2		20	5·8		20	7·8
	40	9·8		40	10·0		40	7·5		40	6·2		40	5·6		40	8·0
3	0	9·8	13	0	10·0	23	0	8·5	33	0	6·0	43	0	5·5	53	0	8·0
	20	10·0		20	9·8		20	10·0		20	6·3		20	5·0		20	8·0
	40	10·0		40	10·0		40	10·5		40	6·3		40	4·5		40	8·0
4	0	10·5	14	0	10·5	24	0	11·5	34	0	6·0	44	0	4·5	54	0	8·0
	20	11·3		20	11·3		20	11·0		20	6·0		20	4·5		20	8·0
	40	11·5		40	12·0		40	10·3		40	6·5		40	4·3		40	8·0
5	0	11·8	15	0	12·5	25	0	10·0	35	0	6·5	45	0	4·3	55	0	8·2
	20	11·8		20	12·3		20	9·5		20	6·3		20	4·3		20	8·2
	40	11·5		40	12·0		40	8·5		40	6·2		40	4·5		40	8·3
6	0	10·5	16	0	11·5	26	0	7·8	36	0	6·5	46	0	4·5	56	0	8·5
	20	10·0		20	11·0		20	7·5		20	6·5		20	4·5		20	9·0
	40	9·0		40	10·0		40	7·5		40	6·3		40	4·3		40	9·5
7	0	9·0	17	0	9·8	27	0	8·0	37	0	6·0	47	0	4·0	57	0	9·5
	20	9·0		20	9·5		20	8·3		20	6·0		20	4·0		20	9·8
	40	9·8		40	9·5		40	8·3		40	6·0		40	4·0		40	9·8
8	0	10·0	18	0	9·8	28	0	8·5	38	0	6·0	48	0	4·0	58	0	10·0
	20	11·0		20	10·5		20	8·3		20	5·8		20	4·0		20	10·0
	40	11·0		40	11·5		40	9·0		40	5·5		40	4·0		40	10·0
9	0	12·0	19	0	12·3	29	0	9·0	39	0	5·0	49	0	4·2	59	0	9·5
	20	11·0		20	12·3		20	8·5		20	4·5		20	5·0		20	9·5
	40	10·5		40	12·0		40	8·3		40	4·5		40	5·8		40	10·0

39° + Commencing the 1st day of *April* 1883, at 4 a.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′
0	0	1 6·0	10	0	1 0·0	20	0	1 3·8	30	0	1 6·0	40	0	1 2·0	50	0	0 56·0
	20	1 5·8		20	1 0·0		20	1 3·8		20	1 6·0		20	1 2·0		20	0 56·0
	40	1 6·0		40	1 0·3		40	1 2·0		40	1 4·0		40	1 2·3		40	0 56·5
1	0	1 6·3	11	0	1 0·0	21	0	1 1·0	31	0	1 4·5	41	0	1 2·0	51	0	0 57·0
	20	1 6·0		20	1 0·5		20	1 1·0		20	1 6·0		20	1 2·0		20	0 56·3
	40	1 5·8		40	1 0·3		40	1 2·0		40	1 5·8		40	1 2·5		40	0 56·3
2	0	1 5·5	12	0	1 0·0	22	0	1 2·5	32	0	1 4·0	42	0	1 3·0	52	0	0 56·0
	20	1 5·3		20	1 0·3		20	1 4·0		20	1 4·0		20	1 3·0		20	0 56·0
	40	1 5·0		40	1 0·0		40	1 5·0		40	1 5·0		40	1 2 0		40	0 56·0
3	0	1 5·0	13	0	1 0·0	23	0	1 5·0	33	0	1 5·0	43	0	1 2·0	53	0	0 57·0
	20	1 6·0		20	1 1·0		20	1 5·0		20	1 6·0		20	1 1·0		20	0 56·0
	40	1 5·5		40	1 1·0		40	1 5·0		40	1 7·0		40	1 0·5		40	0 55·0
4	0	1 5·0	14	0	1 0·8	24	0	1 5·3	34	0	1 5·0	44	0	0 59·5	54	0	0 54·0
	20	1 4·5		20	1 1·3		20	1 6·0		20	1 5·0		20	0 59·5		20	0 54·0
	40	1 4·0		40	1 1·0		40	1 6·5		40	1 4·8		40	0 58·0		40	0 54·0
5	0	1 3·8	15	0	1 2·0	25	0	1 6·0	35	0	1 4·0	45	0	0 58·0	55	0	0 52·0
	20	1 4·0		20	1 2·0		20	1 6·0		20	1 4·0		20	0 59·0		20	0 53·0
	40	1 3·0		40	1 2·0		40	1 6·0		40	1 4·0		40	0 59·0		40	0 53·0
6	0	1 2·5	16	0	1 2·0	26	0	1 5·0	36	0	1 4·0	46	0	0 58·0	56	0	0 54·3
	20	1 4·0		20	1 2·0		20	1 4·5		20	1 5·0		20	0 58·0		20	0 55·0
	40	1 3·0		40	1 2·0		40	1 3·5		40	1 6·0		40	0 58·0		40	0 54·3
7	0	1 2·0	17	0	1 1·3	27	0	1 4·0	37	0	1 6·0	47	0	0 57·8	57	0	0 53·8
	20	1 2·5		20	1 1·0		20	1 4·0		20	1 6·0		20	0 59·0		20	0 54·0
	40	1 2·0		40	1 1·0		40	1 4·0		40	1 5·8		40	0 59·0		40	0 53·0
8	0	1 2·0	18	0	1 1·3	28	0	1 5·0	38	0	1 5·0	48	0	0 59·0	58	0	0 52·0
	20	1 2·0		20	1 1·5		20	1 6·0		20	1 6·0		20	0 58·0		20	0 52·0
	40	1 1·0		40	1 2·0		40	1 7·0		40	1 5·5		40	0 58·0		40	0 52·5
9	0	1 0·0	19	0	1 3·0	29	0	1 7·0	39	0	1 4·0	49	0	0 57·8	59	0	0 52·5
	20	1 0·0		20	1 4·0		20	1 7·0		20	1 4·0		20	0 57·5		20	0 53·5
	40	1 0·0		40	1 4·0		40	1 6·8		40	1 2·5		40	0 56·5		40	0 54·0

40°+ Readings of Declinometer at 20 second intervals.

Commencing the 15th day of *April* 1883, at 5 a.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	9·0	10	0	8·5	20	0	8·4	30	0	8·8	40	0	8·5	50	0	8·5
	20	9·0		20	8·8		20	8·4		20	8·8		20	8·8		20	8·5
	40	9·0		40	8·8		40	8·3		40	8·8		40	8·8		40	8·8
1	0	9·0	11	0	8·8	21	0	8·3	31	0	8·8	41	0	8·8	51	0	8·5
	20	9·0		20	8·8		20	8·3		20	8·8		20	8·8		20	8·5
	40	9·0		40	8·5		40	8·3		40	9·0		40	8·8		40	8·5
2	0	9·0	12	0	8·5	22	0	8·1	32	0	9·0	42	0	8·8	52	0	8·5
	20	9·0		20	8·5		20	8·1		20	9·0		20	8·8		20	8·3
	40	9·0		40	8·5		40	8·0		40	9·0		40	8·8		40	8·3
3	0	8·8	13	0	8·5	23	0	8·3	33	0	9·0	43	0	8·8	53	0	8·5
	20	8·8		20	8·5		20	8·1		20	8·8		20	8·8		20	8·5
	40	8·8		40	8·3		40	8·1		40	8·8		40	8·8		40	8·3
4	0	8·6	14	0	8·3	24	0	8·1	34	0	8·6	44	0	8·8	54	0	8·3
	20	8·6		20	8·5		20	8·2		20	8·5		20	8·8		20	8·3
	40	8·5		40	8·5		40	8·1		40	8·5		40	8·8		40	8·3
5	0	8·5	15	0	8·5	25	0	8·0	35	0	8·2	45	0	8·8	55	0	8·3
	20	8·5		20	8·5		20	8·0		20	8·0		20	8·8		20	8·3
	40	8·5		40	8·5		40	8·0		40	8·0		40	8·8		40	8·1
6	0	8·8	16	0	8·5	26	0	8·0	36	0	8·2	46	0	8·5	56	0	8·1
	20	8·8		20	8·8		20	8·2		20	8·2		20	8·5		20	8·1
	40	8·8		40	8·8		40	8·0		40	8·4		40	8·8		40	8·0
7	0	8·5	17	0	8·8	27	0	8·0	37	0	8·6	47	0	8·8	57	0	8·0
	20	8·8		20	8·8		20	8·2		20	8·5		20	8·8		20	8·0
	40	8·8		40	8·5		40	8·5		40	8·5		40	8·8		40	8·0
8	0	8·5	18	0	8·5	28	0	8·5	38	0	8·7	48	0	8·8	58	0	7·8
	20	8·5		20	8·8		20	8·5		20	8·7		20	8·8		20	7·8
	40	8·5		40	8·8		40	8·7		40	8·8		40	8·8		40	7·8
9	0	8·5	19	0	8·8	29	0	8·7	39	0	8·8	49	0	8·8	59	0	7·8
	20	8·5		20	8·5		20	8·8		20	8·5		20	8·6		20	7·5
	40	8·5		40	8·5		40	8·8		40	8·5		40	8·6		40	7·5

39°+ Commencing the 1st day of *May* 1883, at 6 a.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′
0	0	1 9·0	10	0	1 1·0	20	0	0 55·6	30	0	0 44·0	40	0	0 44·0	50	0	0 57·5
	20	1 12·0		20	1 0·2		20	0 54·0		20	0 44·1		20	0 43·5		20	0 56·1
	40	1 12·1		40	1 0·0		40	0 53·9		40	0 45·0		40	0 43·0		40	0 54·3
1	0	1 12·0	11	0	1 0·0	21	0	0 54·1	31	0	0 46·0	41	0	0 44·0	51	0	0 53·8
	20	1 13·5		20	1 0·0		20	0 54·8		20	0 47·0		20	0 44·0		20	0 53·9
	40	1 14·0		40	1 0·5		40	0 55·2		40	0 47·0		40	0 44·1		40	0 52·0
2	0	1 13·9	12	0	1 1·5	22	0	0 56·1	32	0	0 46·0	42	0	0 44·3	52	0	0 51·5
	20	1 14·0		20	1 1·9		20	0 56·1		20	0 47·5		20	0 45·3		20	0 51·3
	40	1 15·0		40	1 2·0		40	0 54·0		40	0 48·0		40	0 47·5		40	0 52·0
3	0	1 16·0	13	0	1 2·2	23	0	0 51·3	33	0	0 49·8	43	0	0 48·1	53	0	0 51·0
	20	1 15·5		20	1 3·3		20	0 51·6		20	0 50·0		20	0 49·5		20	0 52·0
	40	1 13·9		40	1 3·5		40	0 55·0		40	0 48·0		40	0 50·3		40	0 54·1
4	0	1 13·0	14	0	1 2·3	24	0	0 53·5	34	0	0 48·0	44	0	0 50·1	54	0	0 54·2
	20	1 13·7		20	1 1·8		20	0 51·5		20	0 48·0		20	0 50·0		20	0 54·3
	40	1 14·0		40	1 1·3		40	0 49·0		40	0 48·0		40	0 52·0		40	0 54·5
5	0	1 13·9	15	0	1 0·5	25	0	0 46·0	35	0	0 48·3	45	0	0 52·0	55	0	0 54·0
	20	1 12·8		20	1 1·5		20	0 43·9		20	0 48·5		20	0 53·0		20	0 53·3
	40	1 12·0		40	1 1·3		40	0 42·0		40	0 48·0		40	0 54·3		40	0 53·7
6	0	1 10·0	16	0	1 1·0	26	0	0 40·0	36	0	0 48·0	46	0	0 55·2	56	0	0 54·0
	20	1 8·1		20	0 59·8		20	0 40·0		20	0 48·0		20	0 55·8		20	0 54·1
	40	1 6·5		40	0 59·3		40	0 39·9		40	0 47·0		40	0 56·1		40	0 54·0
7	0	1 6·0	17	0	0 58·1	27	0	0 37·5	37	0	0 47 5	47	0	0 57·3	57	0	0 53·8
	20	1 7·0		20	0 56·8		20	0 37·0		20	0 47·7		20	0 57·1		20	0 53·5
	40	1 6·2		40	0 56·0		40	0 38·0		40	0 47·5		40	0 57·8		40	0 52·3
8	0	1 6·0	18	0	0 55·0	28	0	0 40·0	38	0	0 46·3	48	0	0 57·9	58	0	0 53·0
	20	1 6·3		20	0 54·5		20	0 41·3		20	0 46·0		20	0 58·2		20	0 54·0
	40	1 6·0		40	0 54·3		40	0 42·0		40	0 45·3		40	0 59·5		40	0 54·0
9	0	1 5·5	19	0	0 55·9	29	0	0 42·0	39	0	0 44·3	49	0	1 0·0	59	0	0 53·8
	20	1 4·0		20	0 55·9		20	0 42·5		20	0 44·0		20	0 59·9		20	0 52·8
	40	1 2·0		40	0 56·0		40	0 44·0		40	0 43·3		40	0 58·2		40	0 51·5

40°+ Readings of Declinometer at 20 second intervals.

Commencing the 15th day of *May* 1883, at 7 a.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	1·0	10	0	3·5	20	0	2·3	30	0	2·5	40	0	5·2	50	0	9.0
	20	1·5		20	4·0		20	2·1		20	3·0		20	5·8		20	9·0
	40	2·0		40	4·0		40	2·0		40	3·0		40	5·8		40	10·0
1	0	2·0	11	0	4·2	21	0	2·2	31	0	3·0	41	0	5·8	51	0	11·0
	20	2·0		20	4·2		20	2·2		20	3·2		20	5·5		20	11·5
	40	1·8		40	4·2		40	2·0		40	3·2		40	5·5		40	11·5
2	0	1·8	12	0	4·5	22	0	1·8	32	0	3·4	42	0	5·8	52	0	10·8
	20	1·8		20	4·5		20	1·5		20	3·4		20	5·3		20	10·3
	40	1·8		40	4·5		40	1·5		40	3·6		40	5·0		40	10·3
3	0	1·6	13	0	4·8	23	0	1·8	33	0	3·8	43	0	5·2	53	0	10·0
	20	2·0		20	5.0		20	1·8		20	3·8		20	5·8		20	10·3
	40	2·2		40	5·0		40	1·8		40	3·8		40	6·0		40	11·0
4	0	2·3	14	0	4·6	24	0	1·3	34	0	4·0	44	0	6·5	54	0	11·2
	20	2·2		20	4·2		20	1·0		20	4·0		20	7·0		20	10·5
	40	2·0		40	3·8		40	1·0		40	3·8		40	7·2		40	10·0
5	0	2·0	15	0	3·6	25	0	1·0	35	0	4·0	45	0	7·5	55	0	10·0
	20	2·0		20	3·8		20	1·2		20	4·0		20	7·8		20	10·0
	40	2·0		40	4·0		40	1·2		40	4·0		40	7·8		40	9·8
6	0	2·2	16	0	4·0	26	0	1·2	36	0	3·8	46	0	8·0	56	0	8·5
	20	2·4		20	4·0		20	1·5		20	3·8		20	8·0		20	8·0
	40	3·0		40	4·0		40	1·0		40	4·0		40	7·8		40	7·8
7	0	3·5	17	0	4·0	27	0	0·8	37	0	4·1	47	0	7·5	57	0	6·5
	20	3·8		20	4·0		20	1·0		20	4·0		20	7·8		20	6·0
	40	3·7		40	4·0		40	1·2		40	4·0		40	8·0		40	6·0
8	0	3·5	18	0	4·0	28	0	1·2	38	0	4·0	48	0	8·5	58	0	6·5
	20	3·8		20	3·8		20	1·5		20	4·0		20	9·5		20	7·0
	40	3·8		40	3·5		40	1·8		40	4·0		40	10·0		40	6·8
9	0	3·6	19	0	3·0	29	0	2·0	39	0	4·0	49	0	10·3	59	0	7·0
	20	3·6		20	3·0		20	2·0		20	4·2		20	10·0		20	6·6
	40	3·3		40	2·6		40	2·2		40	4·6		40	9·8		40	6·3

40°+ Commencing the 1st day of *June* 1883, at 8 a.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	18·0	10	0	10·0	20	0	11·5	30	0	12·0	40	0	11·0	50	0	12·3
	20	17·0		20	10·0		20	12·0		20	11·3		20	11·0		20	12·0
	40	17·0		40	10·5		40	11·5		40	12·0		40	10·8		40	12·3
1	0	16·3	11	0	10·3	21	0	12·0	31	0	11·8	41	0	9·5	51	0	12·0
	20	15·0		20	10·8		20	12·0		20	11·5		20	11·0		20	11·3
	40	14·5		40	11·0		40	11·8		40	11·8		40	11·0		40	12·0
2	0	14·0	12	0	11·1	22	0	12·0	32	0	11·8	42	0	11·0	52	0	11·0
	20	13·5		20	11·3		20	11·5		20	11·0		20	11·0		20	11·0
	40	13·3		40	11·4		40	11·3		40	11·0		40	11·1		40	10·8
3	0	13·1	13	0	11·3	23	0	11·8	33	0	11·5	43	0	11·1	53	0	11·0
	20	13·0		20	11·5		20	11·5		20	11·3		20	11·2		20	11·0
	40	12·0		40	11·3		40	12·0		40	11·1		40	12·0		40	12·0
4	0	13·0	14	0	11·5	24	0	12·0	34	0	11·0	44	0	12·0	54	0	11·8
	20	12·8		20	12·0		20	12·0		20	11·1		20	11·5		20	11·1
	40	12·9		40	11·5		40	12·0		40	11·0		40	11·8		40	11·0
5	0	12·3	15	0	12·0	25	0	12·0	35	0	11·0	45	0	11·2	55	0	11·0
	20	12·0		20	12·0		20	12·0		20	10·9		20	11·4		20	11·0
	40	11·8		40	11·8		40	12·3		40	10·9		40	12·3		40	11·1
6	0	11·2	16	0	12·0	26	0	12·3	36	0	11·0	46	0	12·0	56	0	11·1
	20	11·6		20	12·0		20	11·8		20	11·0		20	11·0		20	12·0
	40	11·3		40	12·0		40	12·5		40	11·0		40	11·0		40	12·0
7	0	11·1	17	0	11·5	27	0	12·6	37	0	11·0	47	0	11·1	57	0	12·3
	20	11·0		20	12·0		20	12·3		20	10·8		20	11·2		20	12·0
	40	10·5		40	11·3		40	12·7		40	10·8		40	12·0		40	13·0
8	0	10·3	18	0	12·0	28	0	12·0	38	0	11·0	48	0	12·0	58	0	12·9
	20	10·0		20	12·0		20	12·0		20	10·8		20	11·0		20	13·0
	40	10·3		40	12·3		40	12·0		40	10·9		40	11·3		40	13·0
9	0	10·0	19	0	12·3	29	0	11·3	39	0	11·0	49	0	12·0	59	0	13·0
	20	9·5		20	12·5		20	12·0		20	10·5		20	12·0		20	13·0
	40	9·5		40	11·8		40	12·0		40	11·0		40	12·0		40	13·0

40°+

Readings of Declinometer at 20 second intervals.

Commencing the 15th day of *June* 1883, at 9 a.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min	Sec.	′	Min.	Sec.	′
0	0	10·0	10	0	10·0	20	0	10·5	30	0	11·3	40	0	11·3	50	0	10·1
	20	10·0		20	10·0		20	11·0		20	11·8		20	11·0		20	10·2
	40	9 8		40	10·0		40	11·0		40	11·7		40	11·0		40	10·1
1	0	9·9	11	0	10·0	21	0	10·8	31	0	11·3	41	0	10·8	51	0	10·3
	20	9·7		20	10·0		20	11·5		20	11·3		20	10·0		20	10·0
	40	10·0		40	10·1		40	11·8		40	11·0		40	11·0		40	10·1
2	0	10·1	12	0	10·0	22	0	11·3	32	0	11·0	42	0	11·5	52	0	10·3
	20	11·0		20	10·2		20	11·0		20	11·0		20	11·0		20	10·2
	40	11·0		40	11·0		40	11·8		40	10·8		40	11·0		40	10·0
3	0	11·0	13	0	11·0	23	0	11·9	33	0	11·0	43	0	11·0	53	0	9·0
	20	10·2		20	10·4		20	11·8		20	11·0		20	11·3		20	10·0
	40	10·1		40	10·3		40	11·9		40	10·8		40	11·3		40	10·0
4	0	10·3	14	0	10·5	24	0	12·0	34	0	11·0	44	0	11·3	54	0	10·0
	20	10·2		20	10·1		20	11·5		20	11·0		20	11·8		20	10·0
	40	10·0		40	10·0		40	11·8		40	10·0		40	11·9		40	10·0
5	0	10·0	15	0	10·3	25	0	11·6	35	0	10·0	45	0	12·0	55	0	10·0
	20	10·2		20	11·0		20	11·0		20	10·0		20	11·8		20	10·0
	40	10·0		40	11·0		40	11·0		40	9·8		40	12·0		40	9·9
6	0	10·0	16	0	10·8	26	0	11·2	36	0	10·0	46	0	12·0	56	0	10·0
	20	10·0		20	11·2		20	11·1		20	10·0		20	11·0		20	10·0
	40	9·9		40	11·2		40	11·9		40	10·0		40	11·0		40	10·0
7	0	10·1	17	0	12·0	27	0	11·7	37	0	9·8	47	0	11·7	57	0	10·0
	20	10·0		20	11·0		20	11·8		20	9·8		20	11·0		20	9·5
	40	9·0		40	11·0		40	10·8		40	9·9		40	10·2		40	10·0
8	0	10·0	18	0	11·8	28	0	10·5	38	0	10·0	48	0	10·7	58	0	10·0
	20	10·0		20	11·9		20	11·0		20	10·1		20	11·0		20	10·0
	40	9·9		40	11·0		40	10·2		40	10·2		40	11·3		40	9·9
9	0	10·0	19	0	10·7	29	0	10·3	39	0	10·1	49	0	11·2	59	0	9·9
	20	9·8		20	10·3		20	10·5		20	11·0		20	10·2		20	9·9
	40	9·9		40	10·3		40	10·8		40	11·9		40	10·1		40	10·0

38°+

Commencing the 1st day of *July* 1883, at 10 a.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′	Min.	Sec.	° ′
0	0	1 44·0	10	0	2 19·0	20	0	1 19·0	30	0	1 31·0	40	0	2 17·5	50	0	2 12·0
	20	1 47·0		20	2 22·0		20	1 27·0		20	1 33·0		20	2 20·0		20	2 9·0
	40	1 49·0		40	2 24·5		40	1 35·0		40	1 35·5		40	2 20·5		40	2 8·0
1	0	1 51·0	11	0	2 20·0	21	0	1 40·0	31	0	1 39·0	41	0	2 16·5	51	0	2 7·5
	20	1 53·0		20	2 20·0		20	1 37·0		20	1 41·0		20	2 17·0		20	2 7·0
	40	1 53·0		40	2 21·5		40	1 39·0		40	1 44·5		40	2 18·5		40	1 54·5
2	0	1 51·0	12	0	2 19·0	22	0	1 37·5	32	0	1 47·5	42	0	2 19·0	52	0	2 6·0
	20	1 50·5		20	2 17·0		20	1 35·0		20	1 54·0		20	2 21·0		20	2 6·0
	40	1 47·5		40	2 22·0		40	1 31·0		40	2 0·0		40	2 26·0		40	2 7·5
3	0	1 44·5	13	0	2 21·0	23	0	1 29·0	33	0	1 59·0	43	0	2 29·0	53	0	2 10·5
	20	1 49·0		20	2 15·5		20	1 23·0		20	2 5·5		20	2 31·0		20	2 10·0
	40	1 55·0		40	2 18·5		40	1 17·0		40	2 3·5		40	2 30·0		40	2 7·0
4	0	1 53·0	14	0	2 19·0	24	0	1 5·5	34	0	2 4·5	44	0	2 27·0	54	0	2 5·0
	20	1 58·0		20	2 17·0		20	1 0·5		20	2 3·0		20	2 23·5		20	2 4·0
	40	2 4·0		40	2 19·0		40	0 59·0		40	2 3·0		40	2 22·5		40	2 5·0
5	0	2 4·5	15	0	2 15·0	25	0	1 2·0	35	0	2 9·0	45	0	2 20·0	55	0	2 5·5
	20	2 5·0		20	2 7·0		20	1 4·5		20	2 11·0		20	2 15·5		20	2 5·3
	40	2 8·0		40	2 5·5		40	1 5·5		40	2 11·0		40	2 18·0		40	2 5·5
6	0	2 11·0	16	0	2 5·0	26	0	1 7·0	36	0	2 7·0	46	0	2 23·0	56	0	2 6·8
	20	2 11·0		20	2 4·0		20	1 11·0		20	2 6·0		20	2 30·0		20	2 7·3
	40	2 9·5		40	2 1·0		40	1 18·0		40	2 6·5		40	2 32·0		40	2 7·0
7	0	2 7·0	17	0	1 57·0	27	0	1 23·0	37	0	2 11·0	47	0	2 31·0	57	0	2 6·8
	20	2 1·0		20	1 53·0		20	1 29·5		20	2 12·5		20	2 33·5		20	2 5·3
	40	1 53·0		40	1 54·0		40	1 31·0		40	2 7·5		40	2 36·5		40	2 3·5
8	0	1 36·0	18	0	1 49·0	28	0	1 29·0	38	0	2 3·0	48	0	2 36·5	58	0	2 1·0
	20	1 40·0		20	1 43·5		20	1 28·0		20	1 59·0		20	2 35·5		20	1 57·0
	40	2 1·0		40	1 37·0		40	1 30·0		40	1 59·5		40	2 34·0		40	1 54·5
9	0	2 11·0	19	0	1 30·0	29	0	1 33·5	39	0	2 1·0	49	0	2 29·5	59	0	1 53·0
	20	2 25·0		20	1 25·0		20	1 34·0		20	2 4·5		20	2 24·5		20	1 53·3
	40	2 23·0		40	1 16·0		40	1 33·0		40	2 11·0		40	2 19·0		40	1 54·5

40+ Readings of Declinometer at 20 second intervals.

Commencing the 15th day of *July* 1883, at 11 a.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	17·5	10	0	23·0	20	0	22·0	30	0	21·0	40	0	18·1	50	0	18·0
	20	17·0		20	23·0		20	22·2		20	21·0		20	18·3		20	18·0
	40	16 0		40	23·2		40	22·1		40	20·5		40	19·0		40	17·5
1	0	16·1	11	0	23·0	21	0	22·0	31	0	20·3	41	0	19·2	51	0	17·5
	20	17·8		20	23·8		20	22·0		20	20·1		20	19·5		20	17·5
	40	18·0		40	23·9		40	21·9		40	20·0		40	18·5		40	17·8
2	0	18·0	12	0	22·8	22	0	21·8	32	0	20·0	42	0	19·5	52	0	18·0
	20	18·1		20	22·5		20	21·5		20	20·0		20	20·0		20	18·1
	40	18·0		40	22·8		40	21·0		40	20·0		40	20·0		40	18·1
3	0	19·0	13	0	23·0	23	0	21·0	33	0	20·0	43	0	20·0	53	0	18·3
	20	18·8		20	22·3		20	20·8		20	20·0		20	20·2		20	18·0
	40	20·0		40	22·1		40	21·0		40	20·0		40	20·5		40	18·0
4	0	21·0	14	0	22·0	24	0	22·0	34	0	19·8	44	0	21·0	54	0	19·0
	20	22·2		20	21·8		20	21·0		20	19·5		20	21·3		20	18·2
	40	23·3		40	21·6		40	21·8		40	19·9		40	20·8		40	19·0
5	0	23·0	15	0	20·5	25	0	22·0	35	0	19·7	45	0	20·5	55	0	19·0
	20	23·6		20	21·3		20	22·0		20	19·0		20	20·5		20	19·0
	40	24·0		40	21·0		40	21·9		40	19·2		40	20·3		40	18·0
6	0	23·7	16	0	20·5	26	0	21·8	36	0	19·0	46	0	20·1	56	0	18·7
	20	23·8		20	21·0		20	21·0		20	19·3		20	20·0		20	18·8
	40	23·3		40	21·5		40	21·3		40	19·0		40	19·0		40	18·8
7	0	22·2	17	0	21·0	27	0	21·8	37	0	19·0	47	0	19·5	57	0	19·0
	20	22·0		20	21·0		20	20·8		20	18·0		20	19·3		20	19·5
	40	22·2		40	21·5		40	21·0		40	18·0		40	18·8		40	19·7
8	0	22·3	18	0	21·7	28	0	20·5	38	0	18·1	48	0	18·2	58	0	20·0
	20	22·2		20	21·9		20	20·2		20	18·1		20	18·1		20	20·0
	40	23·0		40	22·0		40	20·0		40	18·0		40	17 8		40	19·9
9	0	23·0	19	0	21·9	29	0	20·0	39	0	18·0	49	0	17·7	59	0	20·0
	20	22·5		20	22·0		20	19·9		20	18·0		20	18·2		20	20·0
	40	22·3		40	22·0		40	20·7		40	18·0		40	18·3		40	20·0

40°+ Commencing the 1st day of *August* 1883, at Noon, Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	49·0	10	0	47·0	20	0	24·0	30	0	26·0	40	0	31·8	50	0	34·5
	20	46·0		20	45·5		20	27·0		20	24·0		20	30·0		20	35·5
	40	46·0		40	42·0		40	28·3		40	22·5		40	30·0		40	37·0
1	0	45·0	11	0	38·3	21	0	31·0	31	0	22·3	41	0	29·9	51	0	37·8
	20	44·0		20	37·0		20	29·5		20	22·0		20	30·2		20	38·0
	40	44·0		40	36·0		40	29·0		40	22·0		40	30·0		40	40·0
2	0	43·0	12	0	34·0	22	0	30·0	32	0	24·0	42	0	30·2	52	0	40·0
	20	44·0		20	33·0		20	28·3		20	24·0		20	31·0		20	39·8
	40	43·0		40	32·8		40	28·0		40	23·5		40	31·3		40	39·8
3	0	42·0	13	0	33·5	23	0	29·5	33	0	24·0	43	0	32·0	53	0	39·7
	20	41·5		20	34·5		20	30·0		20	24·5		20	32·0		20	38·5
	40	42·0		40	35·0		40	29·5		40	26·0		40	32·3		40	37·5
4	0	43·0	14	0	36·0	24	0	29·0	34	0	27·0	44	0	34·0	54	0	35·0
	20	42·0		20	37·0		20	28·0		20	26·3		20	35·8		20	33·5
	40	42·0		40	38·0		40	28·0		40	27·0		40	36·0		40	32·3
5	0	41·7	15	0	39·3	25	0	27·0	35	0	26·5	45	0	37·0	55	0	31·0
	20	41·5		20	40·0		20	26·0		20	27·5		20	37·5		20	29·5
	40	40·0		40	39·0		40	23·0		40	28·0		40	37·3		40	28·0
6	0	41·0	16	0	40·0	26	0	20·0	36	0	28·2	46	0	37·5	56	0	27·0
	20	41·5		20	40·0		20	22·0		20	30·0		20	37·8		20	26·3
	40	43·5		40	37·0		40	22·5		40	30·5		40	37·3		40	25·0
7	0	44·5	17	0	35·3	27	0	21·8	37	0	32·8	47	0	36·5	57	0	24·0
	20	47·0		20	33·5		20	21·0		20	33·5		20	36·3		20	24·5
	40	48·0		40	34·0		40	21·0		40	34·5		40	35·5		40	25·3
8	0	49·5	18	0	34·3	28	0	22·8	38	0	35·0	48	0	35·0	58	0	25·0
	20	51·0		20	31·0		20	23·5		20	34·0		20	34·2		20	24·8
	40	50·5		40	28·0		40	24·8		40	34·0		40	34·3		40	25·0
9	0	50·3	19	0	25·5	29	0	26·0	39	0	33·5	49	0	34·0	59	0	26·0
	20	50·0		20	22·3		20	27·0		20	32·3		20	34·0		20	27·0
	40	49·5		40	23·0		40	26·0		40	32·0		40	34·0		40	29·0

40°+ Readings of Declinometer at 20 second intervals.

Commencing the 15th day of *August* 1883, at 1 p.m., Göttingen Mean Time.

Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.	Time.		Reading.
Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′	Min.	Sec.	′
0	0	27·5	10	0	29·0	20	0	34·0	30	0	36·3	40	0	29·0	50	0	21·5
	20	28·0		20	28·5		20	35·3		20	36·0		20	29·2		20	21·5
	40	28·0		40	28·3		40	36·0		40	36·0		40	29·7		40	22·0
1	0	28·0	11	0	28·3	21	0	36·3	31	0	36·0	41	0	29·8	51	0	22·2
	20	28·2		20	28·3		20	37·2		20	36·0		20	29·8		20	23·0
	40	28·5		40	28·5		40	37·5		40	36·0		40	29·5		40	23·5
2	0	28·5	12	0	28·8	22	0	37·8	32	0	35·8	42	0	29·0	52	0	24·0
	20	29·0		20	28·8		20	37·5		20	35·8		20	29·0		20	23·8
	40	29·0		40	28·5		40	37·3		40	35·5		40	29·0		40	23·5
3	0	29·5	13	0	29·0	23	0	36·5	33	0	35·0	43	0	29·0	53	0	23·0
	20	30·0		20	29·0		20	36·2		20	34·5		20	28·5		20	23·0
	40	30·2		40	29·2		40	36·0		40	34·3		40	28·2		40	23·8
4	0	30·5	14	0	29·5	24	0	36·2	34	0	34·0	44	0	28·0	54	0	24·0
	20	30·3		20	29·7		20	36·5		20	34·0		20	27·5		20	24·5
	40	30·0		40	30·0		40	37·0		40	33·8		40	27·0		40	25·0
5	0	30·0	15	0	30·5	25	0	37·5	35	0	33·5	45	0	26·2	55	0	25·8
	20	30·0		20	31·8		20	38·0		20	33·5		20	26·0		20	26·0
	40	30·0		40	32·0		40	38·0		40	33·0		40	25·8		40	26·0
6	0	30·0	16	0	32·0	26	0	38·0	36	0	33·0	46	0	25·5	56	0	26·2
	20	30·0		20	32·0		20	38·0		20	33·0		20	25·0		20	26·5
	40	30·3		40	31·5		40	38·0		40	32·7		40	24·5		40	27·0
7	0	31·0	17	0	31·0	27	0	38·0	37	0	32·3	47	0	24·0	57	0	27·5
	20	31·5		20	30·6		20	38·0		20	32·0		20	24·0		20	28·0
	40	31·7		40	31·0		40	38·0		40	31·8		40	23·8		40	28·0
8	0	32·0	18	0	31·0	28	0	38·0	38	0	31·3	48	0	23·5	58	0	28·2
	20	32·0		20	31·0		20	37·8		20	30·5		20	23·0		20	28·6
	40	31·7		40	31·2		40	37·8		40	30·0		40	22·2		40	29·0
9	0	31·0	19	0	31·8	29	0	37·5	39	0	29·8	49	0	22·0	59	0	29·2
	20	30·5		20	32·2		20	37·0		20	29·5		20	22·0		20	29·5
	40	30·0		40	33·0		40	37·0		40	29·0		40	21·7		40	29·8

Declination.

September 1882. 36°+ Göttingen Mean Time. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
16	4 30·6	4 27·3	4 32·0	4 34·0	4 30·0	4 33·6	4 30·0	4 29·0	4 31·0	4 32.0	4 32·3	4 34 0	4 34·0	4 35·3
24	4 30·0	4 30·3	4 30·6	4 28·0	4 29·6	4 28·0	4 26·0	4 29·0	4 28·0	4 28·0	4 30·3	4 30·6	4 32·6	4 44·3
29	4 22·6	4 27·0	4 30·0	4 27·6	4 25·0	4 28·3	4 25·6	4 30·3	4 31·0	4 32·0	4 47·6	5 17·6	4 48·0	4 49·3
30	4 18·0	4 20·0	4 20·0	4 18·0	4 18·6	4 17·3	4 15·6	4 28·0	4 9·3	4 15·6	4 16·6	4 41·6	4 28·3	4 32·6
36°+	4 25·3	4 26·2	4 28·2	4 26·9	4 25·8	4 26·8	4 24·3	4 29·1	4 24·8	4 26·9	4 31·7	4 46·0	4 35·7	4 40·4

August 1883. 39°+

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
4	1 8	1 7	1 9	1 11	1 13	1 14	1 16	1 11	1 22	1 15	1 14	1 17	1 18	1 31
9	1 19	1 19	1 17	1 18	1 16	1 16	1 13	1 51	1 5	1 18	1 18	1 19	1 19	1 33
10	1 14	1 16	1 12	1 11	1 12	1 15	1 14	1 15	1 18	1 17	1 17	1 20	1 19	1 27
16	1 15	1 16	1 17	1 16	1 18	1 16	1 16	1 18	1 18	1 19	1 19	1 19	1 24	1 22
17	1 15	1 16	1 14	1 14	1 15	1 17	1 18	1 18	1 21	1 20	1 19	1 19	1 21	1 27
31	1 11	1 10	1 10	1 10	1 10	1 12	1 12	1 12	1 12	1 13	1 15	1 17	1 19	1 24
39°+	1 13·7	1 14·0	1 13·2	1 13·3	1 14·0	1 15·0	1 14·8	1 20·8	1 16·0	1 17·0	1 17·0	1 18·5	1 20·0	1 27·3
40°+	0 19·5	0 20·1	0 20·7	0 20·1	0 19·9	0 20·9	0 19·6	0 25·0	0 20·4	0 22·0	0 24·4	0 32·3	0 27·9	0 33·9

October 1882. 38°+ Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1	2 18·0	2 19·0	2 17·0	2 17·0	2 16·0	2 18·0	2 19·0	2 21·0	2 21·0	2 8·0	2 30·0	2 58·0	2 20·0	2 16·0
19	2 22 3	2 22·0	2 21·7	2 22·0	2 22·0	2 26·0	2 25·0	2 20·0	2 21·7	2 30·7	2 11·7	2 26·3	2 30·0	2 39·7
20	2 21·0	2 24·0	2 23·7	2 25·0	2 24·3	2 24·0	2 24·0	2 24·3	2 23·3	2 23·3	2 24·0	2 27·3	2 29·0	2 28·7
21	2 23·3	2 23·0	2 22·0	2 22·0	2 23·3	2 24·0	2 24·0	2 26·0	2 25·0	2 26·0	2 28·0	2 27·7	2 30·0	2 30·0
38°+	2 21·2	2 22·0	2 21·1	2 21·5	2 21·4	2 23·0	2 23·0	2 22·8	2 22·8	2 22·0	2 23·4	2 34·8	2 27·3	2 28·6

November 1882. 37°+

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
4	3 24·7	3 27·3	3 23·3	3 34·3	3 25·7	3 25·3	3 28·0	3 26·0	3 28·0	3 21·3	3 26·3	3 36·0	3 34·3	3 37·0
10	3 16·0	3 28·3	3 28·3	3 24·0	3 28·3	3 20·0	3 28·0	3 26·3	3 26·0	3 26·7	3 25·3	3 32·7	3 34·3	3 34·7
11	3 28·0	3 21·7	3 22·3	3 28·7	3 28·0	3 27·7	3 27·7	3 28·3	3 28·0	3 29·0	3 27·7	3 28·0	3 29·3	3 34·7
29	3 19·7	3 18·7	3 18·0	3 19·3	3 15·7	3 32·0	3 19·0	3 13·7	3 19·3	3 17·3	3 21·7	3 24·0	3 24·7	3 30·0
37°+	3 22·1	3 24·0	3 23·0	3 26·6	3 24·4	3 26·3	3 25·7	3 23·6	3 25·3	3 23·6	3 25·2	3 30·2	3 30·6	3 34·1
40°+	0 21·7	0 23·0	0 22·1	0 24·1	0 22·9	0 24·7	0 24·4	0 23·2	0 24·1	0 22·8	0 24·3	0 32·5	0 29·0	0 31·4

Fort Rae.

the months of September 1882 and August 1883. *September* 1882.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
4 39·3	4 44·0	4 50·0	4 49·3	4 45·6	4 38·0	4 34·0	4 32·0	4 32·6	4 25·6				
4 43·0	4 40·0	4 40·0	4 40·3	4 41·0	4 33·3	4 30·3	4 28·0	4 24·3	4 25·6				
5 3·3	4 50·6	4 45·0	4 41·3	4 40·0	4 34·3	4 25·0	4 22·0	4 18·0	4 16·0				
4 47·3	5 1·3	5 3·6	4 41·6	4 32·0	4 30·3	4 28·0	4 17·0	4 17·0	4 14·0				
4 48·2	4 49·0	4 49·6	4 43·1	4 39·7	4 34·0	4 29·3	4 24·8	4 23·0	4 20·3	40 32·5	40 49·6	40 20·3	0 29·3

August 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 45	1 38	1 34	1 33	1 29	1 28	1 20	1 12	1 9	1 9				
1 30	1 37	1 38	1 33	1 30	1 22	1 18	1 13	1 15	1 12				
1 27	1 33	1 36	1 37	1 31	1 7	1 12	1 12	1 12	1 8				
1 29	1 33	1 31	1 28	1 26	1 18	1 17	1 15	1 14	1 14				
1 38	1 38	1 37	1 37	1 33	1 26	1 19	1 12	1 2	1 10				
1 24	1 22	1 30	1 23	1 31	1 14	1 11	1 6	1 7	1 8				
1 32·2	1 33·5	1 34·3	1 31·8	1 30·0	1 19·2	1 16·2	1 11·7	1 9·8	1 10·2	40 19·3	40 34·3	40 9·8	0 24·5
0 40·2	0 41·3	0 42·0	0 37·5	0 34·9	0 26·6	0 22·8	0 18·3	0 16·4	0 15·3	40 25·9	40 42·0	40 15·3	0 26·7

the months of October and November 1882. *October* 1882.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 27·0	2 40·0	2 44·0	2 36·0	2 31·0	2 30·0	2 21·0	2 20·0	2 15·0	2 17·0				
2 44·0	2 42·0	2 51·0	2 46·7	2 31·7	2 29·0	2 25·3	2 22·7	2 20·0	2 21·3				
2 30·7	2 35·3	2 38·3	2 37·7	2 34·3	2 28·3	2 24·0	2 25·3	2 22·7	2 23·3				
2 34·3	2 31·3	2 37·3	2 37·7	2 32·3	2 27·0	2 21·3	2 22·0	2 22·7	2 23·7				
2 34·0	2 37·2	2 42·6	2 39·5	2 32·3	2 28·6	2 22·9	2 22·5	2 20·1	2 21·3	40 26·5	40 42·6	40 20·1	0 22·5

November 1882.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
3 37·0	3 36·7	3 39·0	3 43·0	3 35·7	3 36·3	3 31·3	3 27·7	3 29·0	3 28·0				
3 42·0	3 46·3	3 35·7	3 37·0	3 32·0	3 29·0	3 30·3	3 28·7	3 24·7	3 24·3				
3 36·7	3 35·3	3 36·3	3 37·3	3 37·3	3 30·3	3 30·0	3 33·3	3 17·0	3 17·7				
3 25·7	3 25·7	3 26·0	3 26·0	3 26·7	3 26·0	3 22·3	3 20·0	3 18·7	3 18·0				
3 35·4	3 36·0	3 34·3	3 35·8	3 32·9	3 30·4	3 28·5	3 27·4	3 22·4	3 22·0	40 27·8	40 36·0	40 22·0	0 14·0
0 34·7	0 36·6	0 38·5	0 37·7	0 32·6	0 29·5	0 25·7	0 25·0	0 21·3	0 21·7	40 27·2	40 38·5	40 21·3	0 17·2

Declination.

December 1882. 38°+ Göttingen Mean Time. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
6	2 23·3	2 15·3	2 18·3	2 17·3	2 18·2	2 18·2	2 17·2	2 14·3	—	2 31·3	2 25·3	2 18·0	2 23·0	2 21·7
8	2 16·3	2 15·0	2 15·0	2 19·0	2 19·2	2 20·3	2 19·2	2 17·6	2 19·7	2 19·8	2 19·8	2 19·0	2 22·0	2 34·0
14	2 13·7	2 12·7	2 16·0	2 19·3	2 19·7	2 17·7	2 18·3	2 17·5	2 4·3	2 16·0	2 21·3	2 19·0	2 22·5	2 25·3
15	2 17·0	2 18·0	2 17·0	2 19·0	2 18·0	2 20·0	2 19·0	2 20·0	2 15·0	2 19·0	2 20·0	2 20·0	2 28·0	2 26·0
38° +	2 17·6	2 15·3	2 16·6	2 18·7	2 18·8	2 19·1	2 18·4	2 17·4	2 13·0	2 21·5	2 21·6	2 19·0	2 23·9	2 26·7

January 1883. 39°+

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2	1 14·0	1 14·0	1 14·0	1 11·0	1 14·0	1 18·0	1 14·0	1 18·0	1 15·0	1 16·0	1 17·0	1 18·0	1 22·0	1 36·0
3	1 17·3	1 16·3	1 16·0	1 15·3	1 17·5	1 16·7	1 17·3	1 17·2	1 16·7	1 18·7	1 46·5	1 20·3	1 19·2	1 32·5
11	1 10·8	1 9·3	1 6·5	1 1·3	1 7·3	1 18·2	1 15·7	1 16·0	1 14·8	1 14·0	1 17·0	1 17·5	1 18·1	1 19·0
13	1 17·7	1 17·2	1 16·2	1 16·0	1 16·5	1 16·5	1 16·0	1 16·1	1 16·0	1 16·0	1 15·6	1 17·0	1 17·0	1 17·7
23	1 14·7	1 9·2	1 14·7	1 13·0	1 14·6	1 15·0	1 13·0	1 17·7	1 12·3	1 5·3	1 17·7	1 30·3	1 27·0	1 29·2
39° +	1 14·9	1 13·2	1 13·5	1 11·3	1 14·0	1 16·9	1 15·2	1 17·0	1 15·0	1 14·0	1 22·8	1 20·6	1 20·7	1 26·9
40° +	0 16·3	0 14·3	0 15·1	0 15·0	0 16·4	0 18·0	0 16·8	0 17·2	0 14·0	0 17·8	0 22·2	0 19·8	0 22·3	0 26·8

February 1883. 38°+ Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
7	2 11·0	2 10·2	2 11·3	2 9·6	2 11·3	2 12·1	2 35·0	2 5·7	2 14·3	2 15·5	2 11·0	2 19·2	2 22·3	2 20·2
8	2 9·8	2 10·4	2 13·0	2 13·3	2 10·0	2 12·5	2 14·7	2 11·0	2 14·2	2 8·0	2 30·0	2 16·0	2 21·5	2 22·3
10	2 16·7	2 1·7	2 8·2	2 0·5	1 53·0	2 3·8	1 26·0	2 2·7	2 14·0	2 11·7	2 13·0	2 16·7	2 18·8	2 25·2
11	2 15·1	2 14·1	2 14·9	2 14·8	2 15·2	2 15·0	2 13·5	2 14·1	2 8·7	2 23·0	2 8·3	2 17·3	2 16·3	2 16·8
12	2 12·3	2 13·8	2 13·5	2 15·3	2 14·2	2 14·3	2 13·7	2 15·8	2 11·7	2 12·0	2 14·0	2 14·7	2 28·7	2 24·7
13	2 9·8	2 12·5	2 13·5	2 14·0	2 14·2	2 14·6	2 15·1	2 14·0	2 14·0	2 12·0	2 14·0	2 14·6	2 15·9	2 17·3
38° +	2 12·5	2 10·5	2 12·4	2 11·3	2 9·7	2 12·1	2 9·7	2 10·6	2 12·8	2 13·7	2 15·1	2 16·4	2 20·6	2 21·1

March 1883. 38°+

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
11	2 2·3	2 9·3	2 6·3	2 10·7	2 12·7	2 14·1	2 14·3	2 13·6	2 32·0	2 6·7	2 18·0	2 22·0	2 22·2	2 37·3
15	2 13·0	2 11·0	2 12·5	2 11·0	2 9·5	2 13·5	2 17·5	2 34·0	2 29·0	1 59·0	2 22·0	2 23·0	2 26·0	2 20·5
17	2 9·7	2 10·0	2 11·8	2 9·9	2 17·3	2 11·3	2 10·0	2 11·3	2 23·3	2 8·3	2 13·8	2 22·3	2 23·7	2 24·3
19	2 10·0	2 10·0	2 9·7	2 8·8	2 8·8	2 8·3	2 7·0	2 7·3	2 5·9	2 10·2	2 9·8	2 15·3	2 19·3	2 14·2
20	2 8·0	2 8·2	2 8·0	2 6·8	2 7·9	2 8.0	2 8·3	2 8·3	2 8·0	2 9·3	2 10·0	2 9·3	2 10·0	2 12·0
38° +	2 8·6	2 9·7	2 9·7	2 9·4	2 11·2	2 11·0	2 11·4	2 14·9	2 19·6	2 6·7	2 14·7	2 18·4	2 20·2	2 21·7
40° +	0 10·6	0 10·1	0 11·1	0 10·4	0 10·5	0 11·6	0 10·6	0 12·8	0 16 2	0 10·2	0 14·9	0 17·4	0 20·4	0 21·4

the months of December 1882 and January 1883.

December 1882.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 26·3	2 25·2	2 20·7	2 26·7	2 21·0	2 31·0	2 22·0	2 20·0	2 18·5	2 12·7				
2 24·7	2 22·7	2 21·7	2 21·8	2 22·8	2 20·7	2 16·7	2 18·7	2 16·7	2 17·3				
2 35·3	2 28·0	2 21·3	2 25·0	2 22·7	2 20·3	2 17·0	2 16·3	2 14·3	2 14·7				
2 31·0	2 26·0	2 31·0	2 38·0	2 28·0	2 20·0	2 24·0	2 34·0	2 0·0	2 5·0				
2 29·3	2 25·5	2 23·7	2 27·9	2 23·6	2 23·0	2 19·9	2 22·3	2 12·4	2 12·4	40 20·3	40 29·3	40 12·4	0 16·9

January 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 35·0	1 38·0	1 25·0	1 34·0	1 43·0	1 20·0	1 19·0	1 9·0	1 12·0	1 13·0				
1 49·7	1 33·3	1 25·3	1 27·0	1 22·7	1 27·3	1 23·7	1 18·3	1 17·8	1 19·7				
1 18·7	1 19·7	1 20·0	1 20·8	1 20·3	1 18·6	1 14·7	1 14·7	1 15·4	1 16·6				
1 26·3	1 52·3	1 49·7	1 35·7	1 28·7	1 25·8	1 17·2	1 13·8	1 13·7	1 12·8				
1 43·8	1 25·0	1 17·1	1 16·8	1 13·7	1 16·5	1 17·8	1 15·9	1 10·7	1 11·8				
1 34·7	1 33·7	1 27·4	1 26·9	1 25·7	1 21·6	1 18·5	1 14·3	1 13·9	1 14·8	40 19·5	40 34·7	40 11·3	0 23·4
0 32·0	0 29·6	0 25·6	0 27·4	0 24·7	0 22·3	0 19·2	0 18·3	0 13·2	0 13·6	40 20·0	40 32·0	40 13·2	0 18·8

the months of February and March 1883.

February 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 17·7	2 16·3	2 19·8	2 25·3	2 27·8	2 22·2	2 17·8	2 13·7	2 7·0	2 9·5				
2 30·6	2 35·7	2 32·0	2 23·0	2 25·7	2 19·7	2 9·3	2 8·7	2 6·0	2 4·7				
2 44·0	2 33·3	2 27·8	2 20·5	2 16·9	2 17·6	2 10·5	2 7·3	2 9·5	2 12·0				
2 20·0	2 22·0	2 38·3	2 27·7	2 23·3	2 16·0	2 11·3	2 11·0	2 10·8	2 10·3				
2 26·3	2 28·5	2 24·2	2 29·5	2 23·2	2 15·7	2 14·3	2 11·5	2 8·1	2 7·0				
2 23·7	2 24·7	2 30·0	2 27·4	2 22·0	2 22·1	2 18·7	2 12·0	2 9·5	2 9·3				
2 27·0	2 26·8	2 28·7	2 25·6	2 23·1	2 18·9	2 13·6	2 10·7	2 8·5	2 8·6	40 15·8	40 28·7	40 8·5	0 20·2

March 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 42·3	2 49·7	2 39·7	2 28·0	2 20·0	2 22·3	2 15·6	2 11·0	2 7·5	2 7·5				
2 19·0	2 18·0	2 24·0	2 22·0	2 23·0	2 17·5	2 18·0	2 12·5	2 15·0	2 10·0				
2 21·7	2 19·8	2 22·7	2 25·3	2 21·3	2 13·2	2 16·5	2 8·5	2 14·0	2 12·2				
2 16·0	2 17·7	2 20·0	2 20·7	2 21·0	2 15·3	2 15·0	2 7·7	2 8·0	2 7·7				
2 15·7	2 18·7	2 20·8	2 23·8	2 21·7	2 19·8	2 13·8	2 8·4	2 7·2	2 5·3				
2 22·9	2 24·8	2 25·4	2 24·0	2 21·4	2 17·6	2 15·8	2 9·6	2 10·3	2 8·6	40 15·3	40 25·4	40 6·7	0 18·7
0 25·0	0 25·8	0 27·1	0 24·8	0 22·3	0 18·3	0 14·7	0 10·2	0 9·4	0 8·6	40 15·6	40 27·1	40 8·6	0 18·5

Declination.

April 1883. 38°+ Göttingen Mean Time. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
10	2 1·7	2 3·3	1 59·3	2 7·0	2 12·0	2 11·7	2 9·5	2 8·1	2 10·0	2 10·0	2 10·0	2 8·1	2 6·3	2 30·3
14	2 4·8	1 56·2	2 0·0	1 59·3	2 9·2	2 8·7	2 8·3	2 8·8	2 7·0	2 11·0	2 8·7	2 12·0	2 11·3	2 10·2
17	1 59·2	2 0·1	2 4·5	2 2·0	2 2·6	1 56·0	2 0·1	2 11·0	2 0·7	2 5·5	2 9·0	2 8·2	2 21·2	2 25·2
21	2 9·0	2 10·0	2 11·0	2 8·0	2 9·0	2 9·0	2 7·0	2 17·0	2 11·0	2 12·0	2 9·0	2 17·0	2 23·0	2 24·0
22	2 7·0	2 8·0	2 8·0	2 12·5	2 14·0	2 14·0	2 12·0	2 14·0	2 13·0	2 13·0	2 18·0	2 14·0	2 9·0	2 22·0
23	2 6·0	2 3·0	2 4·0	2 12·0	2 12·0	2 12·0	2 12·0	2 11·0	2 12·0	2 11·0	2 10·0	2 22·0	2 14·0	2 19·0
38°+	2 4·6	2 3·4	2 4·5	2 6·8	2 9·8	2 8·6	2 8·2	2 11·7	2 9·0	2 10·4	2 10·8	2 13·5	2 14·0	2 21·8

May 1883. 39°+

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
9	1 4·0	1 4·0	1 8·0	1 7·0	1 6·0	1 11·0	1 6·0	1 6·0	1 40·0	1 7·0	1 35·0	1 28·0	1 18·0	1 26·0
10	1 2·0	1 5·0	1 7·0	1 11·0	1 8·0	1 12·0	1 8·0	1 7·0	1 10·0	1 12·0	1 12·0	1 14·0	1 12·0	1 22·0
11	1 5·0	1 5·0	1 8·0	1 12·0	1 10·0	1 12·0	1 10·0	1 7·0	1 16·0	1 26·0	1 17·0	1 18·0	1 20·0	1 31·0
12	1 5·0	1 6·0	1 10·0	1 2·0	1 2·0	1 3·0	1 2·0	1 2·0	1 26·0	1 4·0	1 9·0	1 19·0	1 16·0	1 21·0
13	1 10·0	1 8·0	1 8·0	1 10·0	1 11·0	1 10·0	1 10·0	1 11·0	1 1·0	1 17·0	1 11·0	1 14·0	1 10·0	1 13·0
15	1 6·0	1 8·0	1 10·0	1 12·0	1 5·0	1 6·0	1 6·0	1 1·0	1 9·0	1 18·0	1 11·0	1 21·0	1 25·0	1 51·0
39°+	1 5·3	1 6·0	1 8·5	1 9·0	1 7·0	1 9·0	1 7·0	1 5·7	1 15·5	1 14·0	1 15·8	1 19·0	1 16·8	1 27·3
40°+	0 5·0	0 4·7	0 6·5	0 7·9	0 8·4	0 8·8	0 7·6	0 8·7	0 12·3	0 12·2	0 13·3	0 16·3	0 15·4	0 24·6

June 1883. 39°+ Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
4	1 8	1 12	1 5	1 10	1 15	1 13	1 11	0 49	0 58	1 19	1 14	1 12	1 14	1 39
5	1 12	1 11	1 12	1 12	1 16	1 17	1 18	1 17	1 16	1 15	1 20	1 25	1 24	1 29
11	1 1	1 1	0 57	0 40	0 51	0 45	0 52	0 54	0 43	0 53	0 58	1 2	1 25	1 26
15	1 3	1 4	1 4	1 10	1 9	1 14	1 10	1 12	1 11	1 12	1 10	1 10	1 14	1 20
39°+	1 6·0	1 7·0	1 4·5	1 3·0	1 7·8	1 7·3	1 7·8	1 3·0	1 2·0	1 9·8	1 10·5	1 12·2	1 19·3	1 28·5

July 1883 38°+

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
21	2 2	2 7	2 7	2 11	2 14	2 15	2 12	2 12	1 51	2 3	2 10	2 14	2 16	2 23
22	2 2	2 7	2 10	2 9	2 12	2 16	2 14	2 14	2 14	2 12	2 16	2 19	2 21	2 23
23	2 4	2 6	1 56	2 3	2 6	2 8	2 8	2 15	2 14	2 29	2 18	2 15	2 21	2 19
28	2 11	2 14	2 15	2 16	2 16	2 16	2 15	2 15	2 15	2 14	2 15	2 19	2 21	2 26
29	2 12	2 14	2 17	2 11	2 14	2 15	2 12	2 7	1 53	1 59	2 19	2 23	2 24	2 27
38°+	2 6·2	2 9·6	2 9·0	2 10·0	2 12·4	2 14·0	2 12·2	2 12·6	2 5·4	2 11·4	2 15·6	2 18·0	2 20·6	2 23·6
40°+	0 6·1	0 8·3	0 6·8	0 6·5	0 10·1	0 10·7	0 10·0	0 7·8	0 3·7	0 10·6	0 13·1	0 15·1	0 20·0	0 26·0

Fort Rae.

the months of April and May 1883. *April* 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 22·0	2 28·0	2 25·7	2 26·5	2 30·5	2 25·7	2 19·5	2 9·2	2 5·7	1 59·2				
2 21·8	2 21·3	2 27·7	2 26·8	2 27·0	2 20·8	2 10·9	2 9·3	2 8·4	2 7·8				
2 27·7	2 24·7	2 22·8	2 21·5	2 22·5	2 21·8	2 13·3	2 6·0	2 3·1	2 1·0				
2 28·0	2 23·0	2 29·0	2 26·0	2 25·0	2 21·0	2 20·0	2 14·0	2 12·0	2 7·0				
2 31·0	2 32·0	2 31·0	2 37·0	2 25·0	2 24·0	2 14·0	2 17·0	2 13·0	2 9·0				
2 21·0	2 31·0	2 28·0	2 27·0	2 28·0	2 23·0	2 22·0	2 9·0	2 9·0	2 8·0				
2 25·3	2 26·7	2 27·4	2 27·5	2 26·3	2 22·7	2 16·6	2 10·8	2 8·5	2 5·3	40 13·9	40 27·5	40 3·4	0 24·1

May 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 23·0	1 35·0	1 28·0	1 26·0	1 23·0	1 13·0	1 11·0	1 7·0	1 8·0	1 3·0				
1 23·0	1 30·0	1 30·0	1 35·0	1 25·0	1 25·0	1 5·0	1 0·0	1 4·0	1 3·0				
1 42·0	1 37·0	1 38·0	1 32·0	1 28·0	1 23·0	1 16·0	1 11·0	1 8·0	1 6·0				
1 30·0	1 28·0	1 36·0	1 32·0	1 24·0	1 18·0	1 13·0	1 7·0	1 8·0	1 6·0				
1 43·0	1 52·0	2 2·0	1 53·0	1 24·0	1 13·0	1 9·0	1 4·0	1 4·0	1 1·0				
1 34·0	1 52·0	1 38·0	1 37·0	1 33·0	1 17·0	1 13·0	1 4·0	1 9·0	1 10·0				
1 32·5	1 39·0	1 38·7	1 35·8	1 26·2	1 18·2	1 11·2	1 5·5	1 6·8	1 4·8	40 16·0	40 39·0	40 4·8	0 34·2
0 28·9	0 32·9	0 33·1	0 31·7	0 26·3	0 20·5	0 13·9	0 8·2	0 7·7	0 5·2	40 15·0	40 33·1	40 4·7	0 28·4

the months of June and July 1883. *June* 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
1 44	2 3	1 34	1 28	1 33	1 23	1 18	1 16	1 7	1 5				
1 33	1 31	1 35	1 38	1 29	1 24	1 19	1 13	1 12	1 11				
1 35	1 32	1 25	1 31	1 27	1 20	1 12	1 5	1 8	1 11				
1 22	1 22	1 24	1 27	1 28	1 28	1 6	1 2	1 4	1 3				
1 33·5	1 37·0	1 29·5	1 31·0	1 29·3	1 23·7	1 13·7	1 9·0	1 7·8	1 7·5	40 14·6	40 37·0	40 2·0	0 35·0

July 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 22	2 26	2 31	2 32	2 30	2 26	2 15	2 8	2 5	2 2				
2 27	2 33	2 35	2 33	2 27	2 23	2 19	2 17	2 11	2 7				
2 26	2 30	2 32	2 33	2 33	2 32	2 20	2 9	2 4	2 2				
2 33	2 49	2 49	2 33	2 30	2 21	2 14	2 13	2 12	2 10				
2 31	2 29	2 30	2 28	2 24	2 25	2 14	2 4	2 8	2 10				
2 27·8	2 33·4	2 35·4	2 31·8	2 28·8	2 25·4	2 16·4	2 10·2	2 8·0	2 6·2	40 16·8	40 35·4	40 5·4	0 30·0
0 30·7	0 35·2	0 32·5	0 31·4	0 29·1	0 24·6	0 15·1	0 9·6	0 7·9	0 6·9	40 15·7	40 35·2	40 3·7	0 31·5

Horizontal Intensity.

September 1882. 0·07000 (C.G.S.) + Göttingen Mean Time. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
16	662	683	658	656	651	656	656	658	656	653	649	649	656	656
24	639	656	660	668	672	662	687	670	668	676	672	664	668	672
29,	678	676	660	654	666	681	664	662	618	599	440	403	465	517
30	653	662	662	674	668	679	693	674	589	622	647	533	616	614
·070000+	6580	6693	6600	6630	6643	6695	6750	6660	6328	6375	6020	5622	6012	6147

August 1883.

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
4	734	708	736	759	745	716	720	664	567	653	678	678	672	656
9	681	674	674	672	672	678	691	561	622	632	666	656	674	635
10	676	676	683	674	670	678	691	685	681	679	685	689	699	689
16	683	676	672	672	672	681	685	670	697	695	697	703	683	707
17	691	689	691	691	689	683	689	691	683	691	693	691	689	687
31	678	689	691	695	695	691	697	695	685	691	689	693	689	685
·070000+	6905	6853	6912	6938	6905	6878	6955	6610	6558	6735	6847	6850	6843	6765
·070000+	6743	6773	6756	6784	6774	6787	6853	6635	6443	6550	6434	6236	6428	6456

October 1882. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
1	658	662	660	666	679	679	670	649	637	620	633	487	660	679
19	674	678	691	685	689	689	701	701	678	658	674	679	658	630
20	672	670	678	678	678	685	685	685	683	681	683	681	662	672
21	670	676	674	674	676	678	681	679	681	676	666	672	664	674
·070000+	6685	6715	6758	6758	6805	6828	6843	6785	6698	6587	6640	6298	6610	6637

November 1882.

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
4	683	685	716	705	693	691	685	699	697	681	691	668	662	653
10	716	672	677	685	670	714	693	681	676	681	681	672	666	666
11	672	699	708	670	679	674	674	670	677	679	679	679	676	656
29	664	679	705	691	732	763	745	743	693	676	653	662	666	651
·070000+	6838	6838	7015	6878	6935	7105	6993	6983	6858	6792	6760	6703	6675	6565
·070000+	6762	6777	6887	6818	6870	6967	6918	6884	6778	6690	6700	6501	6643	6601

Fort Rae.

the months of September 1882 and August 1883. (Bifilar Magnetometer).

September 1882.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
657	654	649	656	653	637	630	628	656	674				
641	676	664	674	664	654	645	656	662	660				
485	597	660	641	653	643	643	645	651	668				
576	548	593	628	668	649	641	639	645	645				
5898	6188	6415	6498	6595	6457	6397	6420	6535	6618	·076407	·076750	·075622	·001128

August 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
637	701	703	693	683	666	660	658	660	683				
672	685	676	689	679	672	670	664	668	676				
710	701	689	676	668	666	660	679	681	664				
710	695	707	697	678	676	668	670	672	689				
687	693	693	679	653	637	633	630	714	676				
687	685	670	670	639	658	664	664	676	670				
6838	6933	6897	6840	6667	6625	6592	6608	6785	6763	·076796	·076955	·076558	·000397
6368	6561	6656	6669	6631	6541	6495	6514	6660	6691	·076602	·076853	·076236	·000617

the months of October and November 1882.

October 1882.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Differenee.
664	637	626	643	643	635	630	632	633	641				
609	643	654	628	653	641	649	647	654	656				
666	658	660	658	662	658	656	674	666	670				
662	676	674	670	668	660	658	664	666	670				
6502	6535	6535	6498	6565	6485	6482	6543	6547	6593	0·076622	0·076843	·076298	·000545

November 1882.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
668	654	653	662	662	656	658	670	672	685				
647	618	654	660	666	664	666	681	683	672				
660	656	664	643	645	649	651	647	647	674				
664	662	676	679	676	670	656	653	660	668				
6597	6475	6618	6610	6622	6597	6578	6627	6655	6748	0·076753	0·077105	0·076475	·000630
6550	6505	6577	6554	6594	6541	6530	6585	6601	6671	0·076688	0·076967	0·076501	·000466

Horizontal Intensity.

December 1882. 0·07000 (C.G.S.)+ Göttingen Mean Time. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
6	703	681	670	685	676	676	677	591	548	576	580	656	658	662
8	677	681	681	676	676	674	676	676	674	676	666	658	662	610
14	691	695	681	689	683	683	685	677	676	653	654	672	668	626
15	683	687	695	697	699	683	679	679	687	668	668	685	662	681
·070000+	6885	6860	6818	6868	6835	6790	6793	6558	6463	6433	6420	6678	6625	6447

January 1883.

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
2	660	666	687	716	710	705	708	705	689	683	674	658	651	559
3	660	676	676	679	672	705	670	672	664	653	519	656	670	624
11	736	705	708	788	771	732	672	664	668	672	668	670	666	662
13	672	670	670	674	678	676	674	674	676	676	676	668	666	668
23	653	679	679	666	672	664	679	681	670	504	500	553	601	597
·070000+	6762	6792	6840	7046	7006	6964	6806	6792	6734	6376	6074	6410	6508	6220
·070000+	6824	6826	6829	6957	6921	6877	6800	6675	6599	6405	6247	6544	6567	6334

February 1883. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
7	679	666	685	697	678	712	732	747	676	678	631	658	653	662
8	678	683	678	685	689	681	695	716	693	651	616	605	653	658
10	685	736	743	747	818	751	755	740	714	687	580	664	660	654
11	670	672	674	674	678	679	683	674	630	610	622	630	681	685
12	670	674	670	676	678	678	685	676	691	678	670	666	610	614
13	678	678	676	678	678	678	676	678	678	681	678	676	672	676
·070000+	6767	6848	6877	6928	7032	6965	7043	7052	6803	6642	6328	6498	6548	6582

March 1883.

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
11	724	687	693	672	683	685	685	689	603	662	658	536	635	563
15	672	679	676	697	724	691	670	662	586	666	662	651	647	658
17	666	674	683	695	699	697	701	683	593	672	555	641	641	645
19	668	666	664	664	670	674	697	693	697	689	651	653	649	681
20	668	670	676	683	691	695	697	691	689	687	689	689	689	687
·070000+	6796	6752	6784	6822	6934	6884	6900	6836	6336	6752	6430	6340	6522	6468
·070000+	6782	6800	6831	6875	6983	6925	6972	6944	6570	6697	6379	6419	6535	6525

Fort Rae.

the months of December 1882 and January 1883. (Bifilar Magnetometer.)

December 1882.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
660	651	679	651	685	653	670	677	677	699				
656	666	672	670	666	662	656	656	658	664				
631	668	685	677	677	656	664	662	666	679				
658	685	672	630	668	662	664	649	591	670				
6513	6675	6770	6570	6740	6582	6635	6610	6480	6780	0·076660	0·076885	0·076420	0·000465

January 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
508	582	693	660	607	626	639	635	676	654				
531	599	660	656	660	656	653	662	658	654				
660	662	666	656	658	651	654	662	658	662				
647	533	534	603	643	668	670	662	662	660				
563	630	681	630	666	662	664	649	666	651				
5818	6012	6468	6410	6468	6526	6560	6540	6640	6562	0·076556	0·077046	0·075818	·001228
6166	6344	6619	6490	6604	6554	6598	6575	6560	6671	0·076608	0·076957	0·076166	·000791

the months of February and March 1883.

February 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
676	678	676	653	662	654	651	660	685	664				
626	588	639	651	645	647	660	662	674	678				
603	662	670	670	681	668	672	678	664	668				
678	658	588	649	645	664	662	668	666	670				
656	641	622	653	649	666	660	660	672	681				
643	662	647	666	668	660	662	668	691	674				
6470	6482	6403	6570	6583	6598	6612	6660	6753	6725	·076699	·077052	·076328	·000724

March 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
527	609	630	643	674	670	662	674	666	668				
687	685	681	681	679	676	660	654	664	664				
662	670	687	664	672	677	664	666	672	641				
676	681	681	668	677	658	664	656	664	666				
685	693	687	679	676	664	662	664	672	681				
6474	6676	6732	6670	6756	6690	6624	6628	6676	6640	·076672	·076934	·076336	·000598
6472	6579	6568	6620	6670	6644	6618	6644	6715	6683	·076686	·076983	·076379	·000604

Horizontal Intensity.

April 1883. 0·07000 (C.G.S.) + Göttingen Mean Time. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
10	654	662	695	689	697	676	676	678	679	679	683	679	660	586
14	678	728	710	710	707	736	707	695	697	683	689	683	681	685
17	664	676	678	703	705	708	645	591	691	689	679	668	654	614
21	660	681	695	728	724	695	681	641	676	679	693	676	680	624
22	674	672	674	678	687	683	681	685	681	687	658	681	681	658
23	666	685	681	689	678	681	683	679	678	681	683	651	670	656
·070000 +	6660	6840	6888	6995	6997	6965	6788	6615	6837	6830	6808	6730	6710	6372

May 1883.

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
9	720	674	660	672	703	716	683	683	683	651	563	582	676	666
10	689	695	703	685	734	740	716	710	689	683	687	674	695	689
11	679	718	745	720	699	712	703	701	612	497	612	610	630	603
12	699	712	732	734	767	759	720	569	599	643	679	666	691	706
13	656	681	695	691	703	714	697	681	593	658	691	674	697	695
15	683	685	695	687	726	745	697	672	653	593	639	597	605	603
·070000 +	6877	6942	7050	6982	7220	7310	7027	6693	6382	6208	6452	6338	6657	6603
·070000 +	6769	6891	6969	6989	7109	7138	6908	6654	6610	6519	6630	6534	6689	6488

June 1883. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
4	708	691	718	712	724	714	685	637	618	626	672	705	708	534
5	681	708	730	730	693	681	685	683	691	681	662	641	679	695
11	707	732	759	812	798	775	687	601	651	645	588	672	693	676
15	699	701	738	753	699	683	691	699	693	693	695	701	691	701
·070000 +	6988	7080	7363	7518	7285	7133	6870	6550	6633	6612	6543	6797	6928	6515

July 1883.

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
21	695	693	699	691	668	685	660	668	622	578	672	685	695	689
22	666	672	674	683	691	689	683	668	681	679	672	676	691	705
23	674	676	741	755	701	678	716	626	553	593	620	645	651	716
28	676	676	679	674	681	681	683	697	687	679	679	679	676	685
29	687	666	679	687	705	749	722	757	678	674	582	658	693	683
·070000 +	6796	6766	6744	6980	6892	6964	6928	6832	6442	6406	6450	6686	6812	6956
·070000 +	6892	6923	7054	7249	7089	7049	6899	6691	6538	6509	6497	6742	6870	6736

Fort Rae.

the months of April and May 1883. (Bifilar Magnetometer.) *April* 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
654	691	705	668	676	666	666	670	693	689				
685	683	695	679	666	668	670	656	654	656				
668	687	693	685	679	672	664	656	662	664				
672	703	701	693	691	678	674	666	666	670				
660	656	647	664	678	674	672	664	658	662				
668	660	683	685	681	672	664	670	666	672				
6678	6800	6873	6790	6785	6717	6683	6637	6665	6628	·076762	·076997	·076372	·000625

May 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
676	705	687	664	672	693	676	701	679	689				
701	693	691	656	683	674	653	676	672	689				
589	687	706	697	689	683	676	672	672	676				
693	703	691	679	681	679	666	662	668	658				
622	565	582	610	674	685	677	677	681	687				
666	633	651	651	681	695	697	674	672	687				
6578	6643	6680	6595	6800	6848	6742	6770	6740	6810	·076748	·077310	·076208	·001102
6628	6722	6777	6693	6793	6783	6713	6704	6703	6749	·076757	·077138	·076488	·000650

the months of June and July 1883. *June* 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
580	593	706	699	679	683	672	668	666	668				
699	691	703	687	681	679	679	670	685	681				
666	707	718	685	707	707	712	705	670	683				
708	695	695	689	668	637	637	656	672	677				
6632	6715	7055	6900	6838	6765	6750	6747	6732	6773	·076863	·077518	·076515	·001003

July 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
707	699	689	666	643	630	620	622	639	651				
703	703	697	679	660	637	632	628	643	662				
714	714	705	693	676	653	643	643	653	641				
637	578	668	689	689	693	691	687	683	678				
691	672	697	676	674	664	679	662	662	660				
6904	6732	6912	6806	6684	6554	6530	6484	6560	6584	·076725	·076980	·076406	·00574
6768	6724	6984	6853	6761	6660	6640	6616	6646	6679	·076795	·077249	·076497	·00752

Vertical Intensity.

September 1882. 0·6100 (C.G.S.) + Göttingen Mean Time. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
16	81	82	93	80	80	77	82	80	81	80	80	78	80	81
24	82	83	84	83	86	83	84	83	79	80	81	81	81	83
29	78	79	77	76	77	76	73	63	68	79	89	91	94	83
30	77	77	77	76	77	77	77	71	70	80	80	82	76	77
0·61000 +	795	802	828	788	800	783	790	743	745	798	825	830	828	810

August 1883.

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
4	83	83	84	82	80	83	80	81	77	83	82	82	83	85
9	80	80	79	79	78	78	77	69	67	83	80	80	80	80
10	77	78	77	77	76	77	77	77	78	77	77	77	77	77
16	73	74	75	74	74	74	74	75	74	73	75	75	75	75
17	75	75	75	74	74	75	74	74	73	73	73	74	75	75
31	78	69	68	69	69	69	68	68	68	67	68	68	68	68
0·61000 +	777	765	763	758	752	760	750	740	728	760	758	760	763	767
0·61000 +	786	784	796	773	776	772	770	742	737	779	792	795	796	789

October 1882. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
1	75	75	74	71	73	74	74	73	70	75	80	84	74	74
19	78	79	78	78	80	79	78	77	78	71	77	77	79	81
20	78	76	77	77	78	78	75	75	75	75	74	74	73	74
21	75	75	75	73	75	75	75	73	73	72	73	72	73	73
0·61000 +	765	763	760	748	765	765	755	745	740	733	760	768	748	755

November 1882.

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
4	55	56	55	55	55	55	55	54	56	58	58	57	58	62
10	67	68	68	69	69	68	68	69	71	69	69	69	71	71
11	72	72	72	73	72	72	72	73	73	72	70	73	73	72
29	84	85	85	83	83	74	79	78	85	82	84	82	82	80
0·61000 +	695	703	700	700	698	673	685	685	713	703	703	703	710	713
0·61000 +	730	733	730	724	732	719	720	715	724	718	732	736	729	734

Fort Rae.

the months of September 1882 and August 1883. (Balance Magnetometer).

September 1882.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
80	77	78	78	80	80	78	79	79	81				
83	81	81	81	82	81	81	81	83	82				
80	77	74	73	75	75	76	77	76	77				
76	80	75	72	75	77	77	76	77	75				
798	788	770	760	780	783	780	783	788	788	·61791	·61830	·61743	·00087

August 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
80	80	80	80	80	79	79	80	80	81				
79	78	77	77	77	77	76	77	77	77				
77	75	75	74	73	74	75	75	77	77				
76	75	71	72	75	73	74	75	75	75				
75	73	73	74	74	73	74	74	76	75				
68	68	68	68	66	65	66	68	68	67				
758	748	740	742	742	735	740	748	755	753	·61753	·61777	·61728	·00049
778	768	755	751	761	759	760	766	772	771	·61772	·61796	·61737	·00059

the months of October and November 1882.

October 1882.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
76	76	71	73	75	75	76	77	76	76				
77	77	75	74	74	75	75	76	76	77				
75	74	78	75	75	75	76	76	77	75				
72	73	71	72	71	72	72	73	74	73				
750	750	738	735	738	743	748	755	758	753	·61752	·61768	·61733	·00035

November 1882.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
64	64	60	61	60	55	56	56	55	53				
71	71	69	69	69	70	70	70	71	72				
72	73	72	77	74	77	77	77	78	80				
80	80	81	81	80	80	79	78	78	80				
718	720	705	720	708	705	705	703	705	713	·61704	·61720	·61673	·00047
734	735	722	728	723	724	727	729	732	733	·61728	·61736	·61715	·00021

Vertical Intensity.

December 1882. 0·6100 (C.G.S.) + Göttingen Mean Time. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
6	73	75	74	76	76	73	71	57	53	84	79	72	72	72
8	72	71	72	71	71	71	69	69	69	69	69	68	68	70
14	72	70	69	71	70	71	71	70	65	71	72	74	72	76
15	76	72	77	77	76	68	73	73	73	75	72	75	75	75
0·61000+	733	720	730	738	733	708	710	673	650	748	730	723	718	733

January 1883.

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
2	80	80	80	77	80	77	76	76	77	78	77	78	78	81
3	78	77	80	79	78	77	76	77	78	81	82	78	78	80
11	76	77	77	79	77	72	73	73	74	73	73	73	73	72
13	72	73	72	72	72	73	72	72	71	70	69	71	71	71
23	82	82	82	82	81	81	81	80	81	71	75	85	84	88
0·61000+	776	778	782	778	776	760	756	756	762	746	752	770	768	784
0·61000+	755	749	756	758	755	734	733	715	705	747	741	747	743	759

February 1883. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
7	79	80	80	78	78	75	71	74	77	77	82	77	78	75
8	76	78	77	77	79	79	77	74	76	75	79	75	75	72
10	77	78	81	79	77	71	52	73	72	75	74	78	79	81
11	76	77	76	77	77	75	75	75	62	68	67	79	75	76
12	77	73	77	76	77	77	68	68	68	67	68	69	69	66
13	68	68	69	70	69	68	68	67	68	69	69	69	69	69
0·61000+	755	757	767	762	762	742	685	718	705	718	732	745	742	732

March 1883.

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
11	81	82	81	80	81	80	80	79	83	64	80	81	83	93
15	78	78	77	78	75	71	73	74	90	76	81	82	78	77
17	80	81	81	80	80	79	79	77	66	78	84	86	81	82
19	75	77	74	73	75	77	77	74	75	73	73	82	81	78
20	76	75	75	75	75	75	75	75	75	75	75	75	76	75
0·61000+	780	786	776	772	72	764	768	758	778	732	786	812	798	810
0·61000+	768	772	772	767	767	753	727	738	742	725	759	779	770	771

Fort Rae.

the months of December 1882 and January 1883. (Balance Magnetometer.) *December* 1882.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
73	73	74	75	74	72	70	68	72	75				
67	66	70	69	69	69	69	69	69	67				
71	69	71	71	71	70	70	69	76	78				
72	74	72	73	73	71	70	75	73	72				
708	705	718	720	718	705	698	703	725	730	·61716	·61748	·61650	·00098

January 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
77	70	73	72	72	74	73	75	78	77				
78	75	77	77	78	77	77	77	78	80				
72	73	72	71	71	72	72	73	73	72				
71	80	66	65	69	71	71	69	69	70				
88	81	81	78	78	80	80	80	79	79				
772	758	738	726	736	748	746	748	754	756	·61759	·61784	·61726	·00058
740	732	728	723	727	727	722	726	740	743	·61738	·61759	·61705	·00054

the months of February and March 1883. *February* 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
77	78	78	78	77	75	74	75	76	77				
77	75	73	75	73	72	73	73	76	78				
79	77	75	77	77	75	74	77	78	78				
74	72	70	71	77	75	75	76	76	77				
67	65	61	66	68	70	69	71	69	69				
72	68	65	67	67	66	67	68	68	68				
745	725	703	723	732	722	720	733	738	745	·61734	·61767	·61685	·00082

March 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
88	73	75	73	79	80	81	80	77	80				
76	77	76	77	77	78	77	78	78	79				
79	81	78	78	80	77	75	77	78	77				
77	77	78	78	76	75	74	72	73	77				
74	75	76	76	75	74	74	75	75	77				
788	766	766	764	774	768	762	764	762	780	·61774	·61812	·61732	·00080
767	746	735	744	753	745	741	749	750	763	·61754	·61779	·61725	·00054

Vertical Intensity.

April 1883. 0·6100 (C.G.S.) + Göttingen Mean Time. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
10	87	84	85	83	82	84	82	84	84	84	83	84	85	90
14	85	85	84	84	83	81	83	82	83	84	84	84	80	83
17	81	81	82	80	82	78	75	73	78	83	83	83	86	89
21	82	83	83	81	79	75	69	70	79	80	81	84	84	81
22	80	79	78	78	78	77	77	77	78	78	82	80	83	83
23	78	79	80	79	79	78	78	77	80	77	77	80	80	81
0·61000+	822	818	820	808	805	788	773	772	803	810	817	825	830	845

May 1883.

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Dy s.														
9	81	77	77	78	80	78	74	77	56	78	77	79	82	77
10	80	80	78	80	79	76	76	74	77	77	78	79	80	79
11	80	79	82	80	78	78	77	77	67	92	90	89	89	91
12	78	81	81	80	68	72	71	71	73	75	80	79	78	78
13	77	78	80	78	78	77	77	75	71	88	81	82	82	85
15	77	78	78	77	79	72	72	77	83	91	85	80	85	80
0·61000+	788	788	793	788	770	755	745	752	712	835	818	813	827	817
0·61000+	805	803	807	798	788	772	759	762	758	823	818	819	829	831

June 1883. Selected undisturbed days during

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
4	81	80	78	80	79	77	75	64	83	88	86	85	86	91
5	79	80	80	78	79	78	78	78	75	78	84	84	81	79
11	82	80	80	77	73	72	73	72	71	72	84	84	80	82
15	78	79	79	78	79	78	78	78	78	78	79	80	80	79
0·61000+	800	798	793	783	775	763	760	730	768	790	833	833	818	828

July 1883.

Hours -	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	h m 0 23	h m 1 23
Days.														
21	75	77	76	77	76	74	75	75	75	78	74	74	74	75
22	77	77	77	77	79	78	75	77	77	77	77	77	78	78
23	78	78	79	81	78	78	76	76	80	75	79	77	77	78
28	79	79	80	80	80	80	79	78	78	77	76	77	79	78
29	78	79	78	79	80	75	72	72	67	80	78	77	77	79
0·61000+	774	780	780	788	786	770	754	756	754	774	768	764	770	776
0·61000+	787	789	787	786	781	767	757	743	761	782	801	799	794	802

the months of April and May 1883. (Balance Magnetometer).

April 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
84	84	83	84	83	83	83	85	86	86				
83	84	83	82	83	83	82	82	81	80				
83	81	81	82	82	80	82	81	80	80				
77	80	80	80	80	80	78	78	79	80				
78	77	75	74	78	77	77	77	78	77				
81	77	75	78	78	76	77	77	78	77				
810	805	795	800	807	798	798	800	803	800	·61806	·61845	·61772	·00073

May 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
79	80	80	79	79	78	77	78	79	81				
78	77	77	76	76	74	75	77	77	79				
77	75	76	77	77	77	77	77	77	78				
77	77	78	76	77	77	76	77	77	77				
86	82	75	70	75	75	73	75	76	78				
78	75	72	73	76	80	77	78	78	78				
792	777	763	752	767	768	758	770	773	785	·61779	·61835	·61712	·00123
801	791	779	776	787	783	778	785	788	793	·61793	·61831	·61758	·00073

the months of June and July 1883.

June 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
84	80	78	78	77	77	77	77	76	77				
78	77	78	77	78	76	75	75	76	77				
86	78	78	78	78	75	76	76	75	75				
80	78	79	78	78	77	78	77	78	79				
820	783	783	778	778	763	765	763	763	770	·61785	·61833	·61730	·00103

July 1883.

h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23	Mean.	Highest.	Lowest.	Difference.
76	76	76	74	73	73	73	75	75	76				
77	77	77	77	75	76	75	75	77	77				
78	77	77	77	75	74	75	75	73	75				
80	78	76	77	76	78	76	77	77	77				
78	77	77	76	75	75	76	75	76	77				
778	770	766	762	748	752	750	754	756	764	·61766	·61788	·61748	·00040
799	777	774	770	763	758	758	759	760	767	·61776	·61802	·61743	·00059

Hourly Means of the selected undisturbed days grouped

Declination. 40° +

Hours	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23
	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
Sept. 1882, Aug. 1883	0 19·5	0 20·1	0 20 7	0 20·1	0 19·9	0 20·9	0 19·6	0 25·0	0 20·4	0 22·0	0 24·4
Oct. and Nov. 1882	0 21·7	0 23·0	0 22·1	0 24·1	0 22·9	0 24·7	0 24·4	0 23·2	0 24·1	0 22·8	0 24·3
Dec. 1882, Jan. 1883	0 16·3	0 14·3	0 15·1	0 15·0	0 16·4	0 18·0	0 16·8	0 17·2	0 14·0	0 17·8	0 22·2
Feb. and March 1883	0 10·6	0 10·1	0 11·1	0 10·4	0 10·5	0 11·6	0 10·6	0 12·8	0 16·2	0 10·2	0 14·9
April and May 1883	0 5·0	0 4·7	0 6·5	0 7·9	0 8·4	0 8·8	0 7·6	0 8·7	0 12·3	0 12·2	0 13·3
June and July 1883	0 6·1	0 8·3	0 6·8	0 6·5	0 10·1	0 10·7	0 10·0	0 7·8	0 3·7	0 10·6	0 13·1
Mean	0 13·2	0 13·4	0 13·7	0 14·0	0 14·7	0 15·8	0 14·8	0 15·8	0 15·1	0 15·9	0 18·7

Horizontal Intensity. 0·070000 (C.G.S.) +

Hours	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23
Sept. 1882, Aug. 1883	6743	6773	6756	6784	6774	6787	6853	6635	6443	6550	6434
Oct. and Nov. 1882	6762	6777	6887	6818	6870	6967	6918	6884	6778	6690	6700
Dec. 1882, Jan. 1883	6824	6826	6829	6957	6921	6877	6800	6675	6599	6405	6247
Feb. and March 1883	6782	6800	6831	6875	6983	6925	6972	6944	6570	6697	6379
April and May 1883	6769	6891	6969	6989	7109	7138	6908	6654	6610	6519	6630
June and July 1883	6892	6923	7054	7249	7089	7049	6899	6691	6538	6509	6497
Mean	679	6832	6888	6945	6958	6957	6892	6747	6590	6562	6481

Vertical Intensity. 0·61000 (C.G.S.) +

Hours	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23
Sept. 1882, Aug. 1883	786	784	796	773	776	772	770	742	737	779	792
Oct. and Nov. 1882	730	733	730	724	732	719	720	715	724	718	732
Dec. 1882, Jan. 1883	755	749	756	758	755	734	733	715	705	747	741
Feb. and March 1883	768	772	772	767	767	753	727	738	742	725	759
April and May 1883	805	803	807	798	788	772	759	762	758	823	818
June and July 1883	787	789	787	786	781	767	757	743	761	782	801
Mean	772	772	775	768	767	753	744	736	738	762	774

in pairs of Months (Göttingen Mean Time).

Declination.

h m 11 23	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
0 32·3	0 27·9	0 33·9	0 40·2	0 41·3	0 42·0	0 37·5	0 34·9	0 26·6	0 22·8	0 18·3	0 16·4	0 15·3
0 32·5	0 29·0	0 31·4	0 34·7	0 36·6	0 38·5	0 37·7	0 32·6	0 29·5	0 25·7	0 25·0	0 21·3	0 21·7
0 19·8	0 22·3	0 26·8	0 32·0	0 29·6	0 25·6	0 27·4	0 24·7	0 22·3	0 19·2	0 18·3	0 13·2	0 13·6
0 17·4	0 20·4	0 21·4	0 25·0	0 25·8	0 27·1	0 24·8	0 22·3	0 18·3	0 14·7	0 10·2	0 9·4	0 8·6
0 16·3	0 15·4	0 24·6	0 28·9	0 32·9	0 33·1	0 31·7	0 26·3	0 20·5	0 13·9	0 8·2	0 7·7	0 5·2
0 15·1	0 20·0	0 26·0	0 30·7	0 35·2	0 32·5	0 31·4	0 29·1	0 24·6	0 15·1	0 9·6	0 7·9	0 6·9
0 22·2	0 22·5	0 27·3	0 31·9	0 33·6	0 33·1	0 31·7	0 28·3	0 23·6	0 18·6	0 14·9	0 12·7	0 11·9

(Bifilar Magnetometer.)

Horizontal Intensity.

h m 11 23	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23
6236	6428	6456	6368	6561	6656	6669	6631	6541	6495	6514	6660	6691
6501	6643	6601	6550	6505	6577	6554	6594	6541	6530	6585	6601	6671
6544	6567	6334	6166	6344	6619	6490	6604	6554	6598	6575	6560	6671
6419	6535	6525	6472	6579	6568	6620	6670	6644	6618	6644	6715	6683
6534	6689	6488	6628	6722	6777	6693	6793	6783	6713	6704	6703	6749
6742	6870	6736	6768	6724	6884	6853	6761	6660	6640	6616	6646	6679
6496	6622	6523	6492	6573	6680	6647	6676	6621	6599	6606	6648	6691

(Balance Magnetometer.)

Vertical Intensity.

h m 11 23	h m 0 23	h m 1 23	h m 2 23	h m 3 23	h m 4 23	h m 5 23	h m 6 23	h m 7 23	h m 8 23	h m 9 23	h m 10 23	h m 11 23
795	796	789	778	768	755	751	761	759	760	766	772	771
736	729	734	734	735	722	728	723	724	727	729	732	733
747	743	759	740	732	728	723	727	727	722	726	740	743
779	770	771	767	746	735	744	753	745	741	749	750	763
819	829	831	801	791	779	776	787	783	778	785	788	793
799	794	802	799	777	774	770	763	758	758	759	760	767
779	777	781	770	758	749	749	752	749	748	752	757	762

37°+ Readings on selected disturbed days during the

Hours - -	A.M. H. M. 0 23	H. 1	H. M. 1 23	H. 2	H. M. 2 23	H. 3	H. M. 3 23	H. 4	H. M. 4 23	H. 5	H. M. 5 23	H. 6
Days. 1882.	°	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
October 6	3 13·6 ↑		3 13·3 ↓		3 13·3 z		3 3·3 ↓		2 28·3 ↑		2 48·3 ↑	
„ 28	3 12·0 ↑		3 19·7 ↓		3 35·3 ↑		3 21·0 ↑		2 41·3 ↑		3 59·3 ?	
November 12	3 23·7 ↑		3 25·0 ↓		3 19·7 z		3 22·0 ?		3 29·3 z		3 19·0 z	
„ 13	3 23·7 ↑		3 20·7 ?		3 1·3 ↑		2 25·7 ↓		2 9·7 ↑		3 9·0 ↑	
„ 17	3 14·7 ↑		3 10·3 ↓		3 23·7 ↑		3 14·7 z		3 28·3 ↓		3 15·3 ↑	
„ 18	3 52·0 ↑		4 37·3 ↓		3 53·7 ↑		0 56·0 ↓		3 4·0 ↓		3 36·3 ↑	
„ 19	3 39·0 ?		3 17·3 ↓		3 12·0 ↓		3 58·0 ↑		4 30·1 ↑		2 58·0 ?	
„ 20	3 32·0 ↓		4 17·3 ↑		4 13·7 ↓		4 35·0 ↓		3 21·3 ↓		2 56·3 ↓	6 36·7 ↓
December 20	3 17·7 z		3 17·3 z		3 18·0 z		3 17·8 z		3 15·2 z		3 13·3 ↓	
„ 21	3 37·7 ↓		3 28·3 ↓		3 18·3 z		5 2·7 z	3 35·0 ↓	3 33·3 ↑		4 43·3 ↑	
1883.												
February 24	3 3·3 z		3 2·3 ↓		3 1·7 z		3 8·8 z		3 11·7 z		3 13·7 ?	
„ 25	2 46·0 z	2 46·2 ?	2 53·5 ?		3 5·0 ↑	3 0·3 ↑	2 24·7 ↓	2 21·0 ↑	2 46·8 ↓	2 27·7 ↑	2 4·3 ↓	2 51·0 ?
„ 27	3 10·0 z		3 2·3 z		3 6·7 z		3 13·5 z		2 59·5 ↑		3 7·0 ↓	
„ 28	3 8·5 ↑		3 8·2 z		3 15·5 ?		3 10·7 ?		2 57·7 ↓		2 51·7 z	
March 27	2 44·3 ↑	2 43·0 ?	3 7·3 ↓		2 54·0 ?		2 43·8 z	3 7·3 z	3 40·3 ↑	2 20·7 ↑	2 35·7 ↑	3 1·5 ?
April 3	2 58·5 ↓		2 59·3 ?		3 5·0 ?		3 7·3 z		3 7·8 z		3 2·2 z	
May 21	3 10·0 z	2 53·0 ?	3 5·0 ?	2 38·0 ?	2 59·0 ↑		2 34·0 ?		2 19·0 ↓		2 3·0 ?	
„ 22	3 9·0 ↑	2 56·0 ?	3 5·0 ↑	2 58·0 ?	3 5·0 z		2 30·0 ?	3 3·0 ?	3 1·0 ↓		2 57·0 ↓	3 40·0 ↑
June 18	3 36·0 ↑	2 30·0 ?	2 42·0 ↑	2 56·0 ?	2 50·0 ↑	2 3·0 ?	3 15·0 ↑	2 48·0 ?	2 52·0 ↑		2 54·0 z	
„ 27	3 11·0 ↑		3 6·0 ↑		3 6·0 z		3 9·0 ↑		3 8·0 z		2 58·0 ↓	

Hours - -	P.M. H. M. 0 23	H. 1	H. M. 1 23	H. 2	H. M. 2 23	H. 3	H. M. 3 23	H. 4	H. M. 4 23	H. 5	H. M. 5 23	H. 6
Days. 1882.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
October 6	2 50·0 ↓		5 31·6 ↓		4 32·6 ↓		3 47·0 z		3 41·0 z		3 56·0 ↑	
„ 28	3 35·3 z		4 3·0 ↓		4 59·7 ↑		4 43·0 ↓		4 18·3 ↑		4 2·7 ↑	
November 12	4 5·0 ↑		5 40·7 ↑		5 57·3 ↑	6 14·0 ?	3 54·3 ↑		4 11·0 ↑		4 19·3 ↑	
„ 13	4 13·3 ↑		5 49·7 ↑		4 10·3 ↓		3 49·3 ?		5 40·7 ↓		6 12·0 ↑	
„ 17	0 13·0 ↓		4 36·0 ↓		2 20·7 ↓		3 42·7 ↓		4 46·7 ↑		3 30·0 ↑	
„ 18	2 32·7 ↓		3 29·3 ↓		3 20·7 ↑		4 14·7 ↑		3 52·0 ↓		4 19·0 ↓	
„ 19	4 53·3 ↓		5 4·3 ?		7 16·7 ↓	0 41·7 ↑	3 4·7 ↑	4 40·3 ↑	5 30·0 ↑	5 27·3 ↑	4 30·7 ↑	4 34·0 ↓
„ 20	4 6·7 ↓	4 6·5 ?	4 51·3 z	4 54·7 ↓	3 24·3 ↓		4 24·7 ↓		3 37·7 ↑		4 10·0 ↓	
December 20	3 44·3 ↑		3 56·3 z		4 28·7 ↑		4 59·7 ↓	6 59·7 ↑	4 56·3 ↑	3 12·0 ?	3 51·3 ↑	3 21·0 ?
„ 21	3 22·7 ↑		3 44·7 z		4 42·0 ↓		4 35·0 ↓		4 10·3 ↑		3 29·7 ?	
1883.												
February 24	3 22·7 ↑		3 26·0 ↓		3 4·7 ↓		4 39·7 ?	5 18·0 ↑	8 14·3 ↑	6 35·0 ↑	6 13·3 ↑	3 30·7 ↑
„ 25	2 58·2 ↑	3 58·0 ?	4 10·0 ↑	3 40·0 ?	3 31·0 ↓		3 10·8 ?		3 25·3 ↓		3 18·3 ↓	
„ 27	3 32·7 z		3 23·0 z		3 27·7 z		3 20·7 ↓	4 20·0 ?	4 34·7 ?		5 2·0 ↓	5 32·0 ?
„ 28	3 50·0 ↑	4 8·5 ?	3 6·3 ↓	4 50·0 ?	4 58·0 ?	5 11·0 ?	4 9·3 ?	3 58·0 ?	3 51·0 ↓	6 47·3 ↑	4 56·3 ↓	2 42·0 ?
March 27	4 36·7 ?	3 33·7 ↓	3 36·7 ↑	4 14·3 ↑	4 54·0 ↑	4 30·5 ?	5 56·3 ↑	5 2·7 ↓	4 39·3 ↑	4 16·3 ↑	3 55·3 ↓	4 30·0 ↓
April 3	4 2·7 ↓	2 21·5 ?	3 27·6 ↓	3 11·0 ↑	3 24·7 ↑		4 12·7 ↑		5 6·0 ↑	4 26·3 ↑	5 5·7 ↓	4 8·5 z
May 21	4 58·0 ↑	4 5·0 ↓	4 7·0 ↓	3 42·0 ?	3 46·0 ↓		5 2·0 ↑	4 48·0 ↑	4 20·0 ↑	4 16·0 ?	3 51·0 ?	
„ 22	3 10·0 ?		3 28·0 z	3 34·0 ?	3 58·0 ↑		4 27·0 ?		4 18·0 ?		3 41·0 ?	
June 18	3 48·0 ↑	3 15·0 ?	3 32·0 ↑	4 3·0 ?	3 59·0 ↓	3 56·0 ↓	4 0·0 ↓		4 27·0 ↓		4 5·0 ↑	
„ 27	5 51·0 ↑	3 15·0 ?	4 1·0 ↑	3 11·0 ↑	3 25·0 ↑	4 28·0 ↑	4 51·0 ↑	5 3·0 ↓	3 54·0 ↑		4 7·0 ↓	3 40·0 ?

Year 1882 and 1883.—Göttingen Mean Time.

H. M. 6 23	H. 7	H. M. 7 23	H. 8	H. M. 8 23	H. 9	H. M. 9 23	H. 10	H. M. 10 23	H. 11	H. M. 11 23	Noon.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
2 30·6 ↕		2 50·6 z		6 4·0 ↕		4 27·0 ↓		2 52·0 ↑		3 54·0 ↕	
3 1·7 ↕		3 3·3 ↕		3 20·0 ?		3 29·3 ↑		3 28·7 z		3 23·7 z	
3 6·7 z		5 49·7 ↕	4 48·0 z	4 1·7 ↑		3 1·0 z		4 18·3 ↕		3 10·7 ↑	
3 0·7 ↓		3 27·3 ?		3 6·3 ↕		4 0·0 ↓	2 15·0 ?	2 22·0 ↓		6 6·7 ↕	
3 17·0 ?		3 24·3 ↓		3 7·3 ↓		3 11·3 ?		4 7·0 ↑		0 12·3 ↕	0 0·0 ↓
2 45·0 ↕		3 15·3 ↑		3 22·0 ↓		4 28·7 ↓		5 46·7 ↕		4 20·0 ↓	2 23·3 ↕
3 38·3 ↑		3 40·7 ↓		3 33·3 ↑		2 36·3 ↕		2 44·3 ↕		3 29·7 ↓	
3 16·0 ↕		3 49·3 ↕		2 30·7 ↓			0 12·3 ↓	1 37·3 ↕	4 33·3 ↕	5 30·0 ↓	
3 17·7 z		3 14·3 z		3 16·3 ↕	3 51·3 ↓	3 35·3 ↕		3 38·0 ↓		3 35·0 z	
4 18·3 ?		2 13·3 ↕	1 30·3 ↕	2 7·7 ↕	−0 0·7 ↓	2 49·0 z		4 45·3 ↓		4 11·7 ↕	
3 4·3 ↑	2 5·3 ↕	2 44·5 ↑	2 59·7 ↑	3 5·7 ↑		3 12·3 z		3 25·3 ↑		3 38·7 ↑	3 39·0 ?
2 32·7 ↑	2 39·0 ↕	2 32·0 ?	2 44·7 ↕	2 40·0 ↑	4 43·3 ↓	3 13·0 ↑	2 44·0 ↕	2 18·7 ↓	3 51·0 ?	3 45·0 ↕	2 56·0 ?
3 8·2 ↑		3 17·2 ↕		3 2·5 z		3 42·3 ↓	3 37·3 ↕	3 18·0 ↓		3 23·0 ?	
2 33·7 ?		4 23·3 ↑	2 20·3 ↑	3 13·3 ↓		3 35·7 ↕	2 23·7 ↕	3 8·3 ?		3 17·7 ↓	
3 4·3 ↑		3 2·0 z		2 50·7 ↓	4 3·3 ↕	2 47·3 ↕	1 52·3 ↕	3 23·7 ↑		4 41·0 ↑	3 19·3 ↕
3 0·7 z		2 56·7 z		2 35·3 ↓	2 41·0 ↕	2 40·3 ↕		2 33·0 ↕		3 10·0 ?	
2 32·0 ↕		2 22·0 ↓	2 47·0 ↕	3 28·0 ↕	2 12·0 ↓	4 18·0 ↕	2 54·0 ?	2 49·0 ↓		3 26·0 ↕	
3 6·0 ↓	2 55·0 ?	2 45·0 ↑		1 45·0 ↕	3 7·0 ?	2 19·0 ↕	2 56·0 ?	2 58·0 z		3 23·0 ↕	
3 46·0 ↓	2 32·0 ↕	3 36·0 ↓	2 27·0 ↓	3 31·0 ↓	3 11·0 ↕	2 28·0 ?	3 26·0 ↓	2 21·0 ↕	3 37·0 ↓	3 7·0 ↑	3 30·0 ?
2 54·0 ?		2 58·0 ↓		2 50·0 ?		3 15·0 ↑		2 32·0 ↕	3 39·0 ↓	4 17·0 ↓	5 9·0 ↕

H. M. 6 23	H. 7	H. M. 7 23	H. 8	H. M. 8 23	H. 9	H. M. 9 23	H. 10	H. M. 10 23	H. 11	H. M. 11 23	Midnight.
° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
3 49·3 z		3 15·0 z		3 12·6 z		3 22·6 ↓		3 13·6 ↓		3 20·3 z	
3 29·0 ↕		3 30·7 ↕		3 19·0 ↕		3 27·3 ↓		3 3·7 ↕		3 28·7 ↓	
3 38·3 ↓		3 33·7 ?		3 27·7 ↑		3 10·0 ↕		3 17·7 ↕		3 19·7 ?	
5 32·7 ↓		4 32·7 z		3 43·3 ↕		3 29·3 ↓		3 48·3 ↓		3 53·0 ↓	
*7 50·0 ?	*8 6·0 ?	7 6·7 ↕		4 16·7 ↕		4 46·3 ↓		3 16·7 ↑		4 3·7 ?	
3 37·3 ↕		4 42·7 ↓		4 0·3 ↕		3 29·3 ↕		4 38·0 ?		4 11·0 ↓	
4 18·0 ↓		3 42·3 ↕		3 34·0 ↓		3 23·3 ↕		3 25·0 ↕		3 19·7 ↕	
4 5·7 ↕		4 36·7 ↓		4 33·3 ?		3 56·7 ↑		3 22·7 ↕		3 39·0 ↕	
3 23·7 ↓		3 40·7 ↕		2 50·3 ↓		3 11·0 ↑		3 34·0 ↓		3 38·3 z	
3 53·0 ↓		3 32·0 ↓		3 20·5 ↕		3 7·7 ↑		3 16·5 ↑		3 19·0 ↑	
4 13·7 ?	3 37·3 ↓	3 35·0 ↓	3 20·0 ?	3 31·7 ↕	4 50·0 ?	4 10·7 ↕	3 14·0 ?	3 17·0 ↕	2 54·0 ?	2 48·2 ↓	
3 25·7 ↕		3 19·3 ?		3 23·3 ↕		3 14·7 z		3 9·0 z		3 12·7 ↓	
4 59·3 ↕	5 26·3 ↕	5 0·7 ↕	4 20·0 ?	3 36·0 ↓		3 51·0 ?		3 1·3 ?		2 52·8 ↓	
4 43·3 ↑	3 37·3 ↕	3 20·3 ?	3 16·0 ?	3 2·3 ?		3 18·3 ↕	3 7·0 ?	3 15·3 ?		3 26·7 ↓	
5 20·0 ↕	4 9·0 ↕	3 59·7 ?	3 14·0 ↓	3 21·0 ↕		3 27·7 ↓		3 31·0 ↕	3 1·0 ?	3 0·3 ↕	2 46·3 ↑
3 28·7 ?	4 41·0 ?	3 50·7 ↓		3 26·7 ↕		3 45·0 ↕		3 28·0 ↓		3 39·7 ↑	
3 32·0 ↕		3 32·0 ↕		3 53·0 ↕	4 5·0 ?	4 9·0 ↓	4 5·0 ?	3 37·0 ?	3 19·0 ?	3 20·0 ↓	2 51·0 ?
3 40·0 ↓		3 19·0 ?		3 12·0 ↑		3 16·0 ?		3 14·0 ?		3 10·0 ↕	
3 44·0 ↕		3 25·0 ↕		3 35·0 ↑		3 25·0 ↑		3 14·0 ?	3 8·0 ?	2 54·0 ↕	
3 48·0 ↕	3 35·0 ?	4 4·0 ↕		3 48·0 ↓		3 23·0 ↑		3 9·0 z		3 12·0 z	

* Approximate.

0·07000. (C.G.S. Units.) + Readings on selected disturbed days during the

Hours - -	A.M. H. M. 0 23	H. 1	H. M. 1 23	H. 2	H. M. 2 23	H. 3	H. M. 3 23	H. 4	H. M. 4 23	H. 5	H. M. 5 23	H. 6
Days.												
1882.												
October 6	734 ↓		808 ?		767 ↕		500 ↓		298 ↓		−004 ↕	
„ 28	790 ↓		767 ↑		724 ↑		726 ↓		679 ↓		270 ↕	
November 12	670 ?		757 ↓		806 ↓		751 ?		687 ↑		714 ?	
„ 13	593 ?		557 ?		536 ↑		605 ↕		679 ↓		392 ↕	
„ 17	810 ↓		782 ↕		792 ↑		745 ↕		658 ↕		730 ↕	
„ 18	450 ↑		216 ↑		144 ↕		173 ↕		194 ↓		322 ↕	
„ 19	455 ↕		749 ↓		724 ↑		519 ↕		425 ↕		546 ↕	
„ 20	641 ↕		588 ↓		283 ↓		137 ↕		258 ↕		189 ↑	−443 ↑
December 20	660 z		668 z		666 z		676 z		716 z		712 ↓	
„ 21	553 ↑		550 ↑		601 ↓		388 ↕	559 ↕	548 ↓		467 ↓	
1883.												
February 24	736 ↑		701 ↑		738 ↕		699 ↑		755 ?		718 ↑	
„ 25	833 ↕	881 ?	804 ↓		578 ↕	164 ↕	026 ↕	372 ↕	506 ↓	666 ↕	582 ↕	502 ?
„ 27	693 ?		745 ↑		738 ↑		759 ?		763 ?		743 z	
„ 28	871 ↓		948 ↕		895 ↓		830 ↕		765 ↕		633 ↓	
March 27	796 ?	695 ?	660 ↑		745 ↕		622 ↓	517 ?	403 ↓	708 ↑	800 ?	765 ?
April 3	726 ↕		759 ?		691 z		678 ↓		681 z		685 ↕	
May 21	881 ?	897 ?	708 ↓	660 ?	647 ↕		551 ↕		555 ↓		599 ↑	
„ 22	859 ↓	726 ?	674 ↕	763 ?	782 ↕		597 ↑	796 ?	779 ↕		614 ↓	670 ↕
June 18	853 ↕	833 ↑	857 ↕	749 ↕	835 ↕	710 ↕	743 ↓	767 ?	781 ↓		705 ?	
„ 27	651 ↕		689 ↕		699 ?		701 ?		703 ↓		714 ↑	

Hours - -	P.M. H. M. 0 23	H. 1	H. M. 1 23	H. 2	H. M. 2 23	H. 3	H. M. 3 23	H. 4	H. M. 4 23	H. 5	H. M. 5 23	H. 6
Days.												
1882.												
October 6	229 ↑		185 ↓		296 ↕		678 ↓		745 ↓		440 ↓	
„ 28	660 ?		570 ↓		113 ↕		403 ↕		499 ↑		645 ↕	
November 12	649 ↓		245 ↓		−002 ↕	364 ?	495 ↕		697 ↕		260 ↓	
„ 13	504 ↑		019 ↕		388 ↕		658 ↓		474 ↕		388 ↓	
„ 17	429 ?		337 ↕		457 ↕		570 ↕		728 ↓		1053 ↕	
„ 18	635 ↓		720 ↑		732 ↕		512 ↑		710 ↕		605 ↕	
„ 19	180 ↕		269 ↑		*	−004 ↓	−293 ↓	463 ↕	−051 ↕	331 ↕	597 ↕	591 ↑
„ 20	−102 ↕	−309 ↕	196 ↕	375 ↕	855 ↑		716 ↕		855 ↓		966 ↕	
December 20	570 ↓		497 ↓		424 ↓		099 ↕	184 ↕	121 ↑	348 ?	544 ↕	745 ?
„ 21	637 ?		612 ↓		394 ↓		467 ↑		589 ↕		674 ↕	
1883.												
February 24	647 ?		668 ↑		747 ↑		469 ↑	094 ↓	−174 ↓	−215 ↕	017 ↕	338 ↕
„ 25	668 ↓	326 ?	398 ↕	607 ?	651 ?		693 ↓		656 ↕		701 ?	
„ 27	597 ↑		605 ↕		637 ?		429 ↕	500 ?	497 ↕		399 ↓	327 ?
„ 28	656 ↓	178 ?	276 ?	379 ?	261 ?	392 ?	553 ↑	660 ?	318 ↓	087 ↕	000 ↕	639 ?
March 27	555 ↓	643 ↑	538 ↕	578 ↓	405 ↓	424 ?	291 ↕	283 ↓	409 ↕	533 ↑	570 ?	517 ↓
April 3	601 ↓	346 ?	377 ↓	679 ↕	722 ↕		716 ↕		626 ↕	796 ↓	822 ↕	720 ?
May 21	−056 ↕	311 ↑	386 ↓	555 ?	612 ↕		095 ↕	368 ↕	292 ↑	597 ?	712 ?	
„ 22	654 ↓		529 ↕	651 ?	591 ↓		555 ↓		586 ?		681 ↕	
June 18	454 ↓	658 ?	548 ↓	578 ↑	612 z	614 ?	599 ↕		485 ↕		645 ↕	
„ 27	338 ↕	521 ↑	418 ↑	200 ↕	364 ↕	424 ↕	379 ↕	372 ↑	656 ↕		551 ↓	580 ?

Year 1882–83.—Göttingen Mean Time. (Bifilar Magnetometer).

H. M. 6 23	H. 7	H. M. 7 23	H. 8	H. M. 8 23	H. 9	H. M. 9 23	H. 10	H. M. 10 23	H. 11	H. M. 11 23	Noon.
491 ↓		632 ?		−143 z		−021 ↑		463 ?		550 ↓	
351 ↑		548 ↓		624 ↑		676 ↕		681 ?		693 ↓	
681 ↓		−332 ↕	−076 ?	403 ↓		538 ?		676 ↓		440 ↓	
470 ↕		398 ↕		563 ↕		014 ↕	067 ?	236 ↓		212 ↑	
685 ↓		597 ↓		668 ↓		630 ↓		457 ↓		*−1095 ?	−014 ↕
474 ↓		487 ↓		424 ↕		331 ↓		589 ↕		−129 ↕	329 ↓
618 ↕		557 ↓		576 ↓		403 ↑		572 ↓		437 ?	
−002 ↕		101 ↕		351 ↕		*	−680 ↑	−246 ↓	−160 ↑	207 ↑	
728 ↓		668 ↓		506 ↓	527 ↑	565 ↕		531 ?		565 ↓	
595 ↓		−060 ↑	315	−131 ↓	164 ↓	126 ↕		296 ↑		542 ↑	
668 ↓	697 ↕	607 ↓	708 z	732 ?		677 z		616 z		401 ↓	565 ?
362 ↑	292 ↕	591 ↓	497 ↓	580 ↕	193 ↓	461 ↕	414 ↓	232 ↓	431 ?	478 ↕	536 ?
718 ↑		693 z		576 ↕		294 ↓	448 ↑	614 ↑		653 ↓	
626 ↓		178 ↓	329 ↑	708 ↓		506 ↓	540 ↕	435 ↓		620 ↑	
728 ↕		656 z		588 ↓	372 ↕	469 ↓	372 ↓	444 ↓		305 ↓	527 ↕
685 ↓		664 ↓		361 ↑	399 ↕	582 ↕		591 ↑		666 ↓	
563 ↕		452 ↕	517 ↓	283 ↕	313 ↕	340 ↓	607 ?	660 ↓		628 ↕	
710 ↑	572 ?	624 ↑		182 ↓	551 ?	348 ↕	574 ?	635 z		649 ↑	
381 ↓	158 ↕	140 ↓	607 ↕	463 ↓	510 ↓	614 ↕	591 ↕	362 ↓	351 ↑↓	557 ↑	559 ↓
678 ↓		672 ↕		691 ↕		703 ↓		−018 ↓	265 ↑	425 ↑	461 ↓

H. M. 6 23	H. 7	H. M. 7 23	H. 8	H. M. 8 23	H. 9	H. M. 9 23	H. 10	H. M. 10 23	H. 11	H. M. 11 23	Midnight.
569 ↑		693 ↑		687 ?		705 ?		697 ↓		710 ↓	
612 ↕		645 ↑		699 ↕		745 ↑		818 ↕		701 ↑	
734 ↑		794 ↓		693 ?		757 ↕		800 ↓		635 ↓	
333 ↕		693 ?		609 ↕		769 ↕		749 ↑		555 ↕	
079 ↕	−497 ?	−108 ↓		439 ↓		169 ↑		681 ↓		538 ↓	
647 ↓		510 ↑		628 ↓		736 ↕		570 ↓		521 ↑	
622 ↑		674 ↓		695 ↕		710 ↓		578 ↕		649 ↕	
903 ↓		603 ↓		720 ↕		628 ↓		804 ↑		681 ↓	
788 ↓		741 ↕		607 ↕		714 ↓		716 ↓		712 ↓	
588 ↕		670 ↑		703 ↓		610 ↕		726 ↓		683 ?	
442 ?	570 ↑	599 ↓	612 ?	565 ↕	525 ?	508 ↕	435 ?	697 ↓	726 ?	712 ?	
691 ↓		689 ↓		656 ↕		683 ?		679 ↑		689 ↕	
294 ↕	108 ↓	104 ↑	427 ?	649 ↕		601 ?		790 ↕		830 ↕	
444 ↓	637 ↓	647 ?	724 ?	701 ↕		757 ↓	743 ?	722 ↕		716 ↑	
307 ↕	495 ↓	565 ↓	624 ↕	662 ↕		681 ↓		703 ↓	753 ?	771 ↕	802 ↓
826 ↓	444 ?	523 ↕		647 ↓		616 ↑		804 ↕		683 ?	
745 ↕		685 ↓		828 ↓	832 ?	863 ↓	820 ?	841 ↓	934 ?	833 ↑	907 ?
705 ?		722 ↓		662 ?		720 ↑		740 ↕		780 ↓	
736 ↕		705 ↓		681 ?		765 ↕		855 ↓	745 ?	771 ↑	
761 ↓	757 ?	705 ↓		707 ↑		759 ↓		824 ↑		705 ?	

* Approximate.

0·6100. (C.G.S.) + Readings on selected disturbed days during the

Hours -	A.M. H. M. 0 23	H. 1	H. M. 1 23	H. 2	H. M. 2 23	H. 3	H. M. 3 23	H. 4	H. M. 4 23	H. 5	H. M. 5 23	H. 6
Days. 1882.												
October 6	79 ↑		77 ≍		66 ↓		73 ↓		75 ↓		28 ?	
„ 28	69 ↓		69 ↓		58 ↑		70 ↑		57 ↑		74 ↑	
November 12	78 ↑		80 ↑		80 ↑		70 ↓		72 ↑		71 ↓	
„ 13	74 ↑		75 ↓		78 ↓		67 ↑		73 ↑		98 ↓	
„ 17	43 ?		43 ↓		47 ↑		51 ↓		44 ↓		47 ↑	
„ 18	53 ↓		50 ↓		55 ≍		62 ↓		69 ↓		74 ↑	
„ 19	47 ↑		48 ↓		54 ↑		48 ↓		59 ↑		72 ↓	
„ 20	68 ↑		58 ↓		59 ↓		72 ↓		56 ↓		73 ↓	110 ↑
December 20	72 ↓		75 ↑		75 ≍		76 ↑		77 ↓		69 ↓	
„ 21	63 ↓		62 ↓		66 ↓		26 ↓	57 ↑	55 ↑		78 ↓	
1883.												
February 24	80 ↑		76 ↓		76 ↑		78 ↓		73 ↑		67 ↑	
„ 25	82 ↓	67 ?	59 ↓		52 ↓	74 ↓	74 ↑	67 ↓	59 ↓	61 ↓	68 ↑	77 ?
„ 27	80 ↑		78 ↓		79 ↓		77 ↑		81 ↑		77 ↓	
„ 28	56 ↓		67 ↑		67 ↑		67 ↑		66 ↑		72 ↑	
March 27	<55 ?	103 ?	56 ↓		48 ↓		61 ↑	58 ?	43 ↓		53 ↑	64 ?
April 3	85 ↓		85 ↓		84 ↑		84 ↑		85 ↓		84 ↑	
May 21	71 ↓		<68 ?		<68 ?		<69 ?		<68 ?		<68 ?	
„ 22	<66 ?		<64 ?		<63 ?		<62 ?		<62 ?		<62 ↓	
June 18	37 ↑	61 ↑	68 ↑	77 ↑	72 ↑	52 ↓	39 ↓	65 ?	68 ↑		76 ↑	
„ 27	76 ↓		75 ↓		76 ↓		76 ↑		75 ↓		73 ↓	

Hours - -	P.M. H. M. 0 23	H. 1	H. M. 1 23	H. 2	H. M. 2 23	H. 3	H. M. 3 23	H. 4	H. M. 4 23	H. 5	H. M. 5 23	H. 6
Days. 1882.												
October 6	103 ≍		105 ≍		105 ≍		102 ↑		103 ≍		105 ≍	
„ 28	80 ↑		91 ↓		90 ↑		93 ↑		91 ↑		73 ↓	
November 12	102 ↑		101 ↓		108 ↑	103 ?	93 ↓		98 ↑		112 ↑	
„ 13	129 ≍		139 ↓		>141 ?		78 ↓		122 ↑		125 ?	
„ 17	95 ↓		110 ↓		111 ↑		103 ↓		119 ≍		58 ↑	
„ 18	78 ↓		82 ↑		73 ↑		96 ↑		55 ↓		65 ↑	
„ 19	72 ↑		84 ↓		68 ↑	91	100 ↑	121 ↓	80 ↓	79 ↑	76 ↓	66 ↑
„ 20	>126 ?		>125 ?		120 ↓		124 ≍		113 ↑		96 ↓	
December 20	90 ↓		96 ↓		120 ↑		91 ↓	77 ?	73 ↑	69 ?	103 ↑	82 ?
„ 21	97 ↑		91 ↓		99 ↑		96 ↓		77 ↑		77 ↓	
1883.												
February 24	78 ↑		76 ↑		80 ↑		109 ↑	140 ↓	150 ↑	101 ↓	52 ↓	67 ↓
„ 25	107 ↓	100 ?	80 ↓	90 ?	83 ↓		82 ?		77 ↓		80 ↓	
„ 27	82 ↓		77 ↓		78 ↓		101 ↑	90 ?	88 ↑		90 ↑	96 ?
„ 28	95 ↑	146 ?	109 ↓	116 ?	120 ↑	126 ?	109 ↓	106 ?	117 ↓	120 ↑	97 ↑	74 ↑
March 27	98 ↑	94 ↑	103 ↑	123 ↑	132 ↑	124 ?	119 ↑	113 ↑	113 ↓	95 ↓	111 ↑	106 ↓
April 3	127 ↑	165 ?	155 ↓	116 ↓	105 ↓		110 ↓		125 ↑	115 ↓	117 ↑	103 ?
May 21	108 ↓	86 ↑	100 ↓	106 ?	100 ↑		85 ↑	77 ↑	84 ↓	76 ?	78 ↑	
„ 22	95 ?		99 ↓	90 ?	93 ↓		86 ↓		73 ↓		76 ↓	
June 18	95 ↓	93 ↑	95 ↑	94 ↓	89 ↓	98 ↓	92 ↓		83 ↓		76 ↑	
„ 27	131 ↑	116 ↓	>140 ?	107 ↓	100 ↑	98 ↓	84 ↓	89 ≍	78 ↓		84 ↑	77 ?

Year 1882-83.—Göttingen Mean Time. (Balance Magnetometer).

H. M. 6 23	H. 7	H. M. 7 23	H. 8	H. M. 8 23	H. 9	H. M. 9 23	H. 10	H. M. 10 23	H. 11	H. M. 11 23	Noon.
78 ↑		84 z		101 z		100 z		102 z		102 z	
84 ↓		67 ↑		74 ↓		79 ↓		74 z		73 ↑	
74 ↑		115 ↓	118 ?	90 ↕		88 ↑		110 ↕		102 ↓	
103 ↓		97 ↑		55 ↕		>139 ?	128 ?	132 ?		123 ↕	
48 ↑		49 ↓		56 ↑		64 ↓		62 ↑		27 ↓	
83 ↕		84 ↓		58 ↓		121 z		75 ↑		66 ↑	118 ↕
90 ↓		54 ↑		69 ↑		67 ?		69 ↑		73 ↓	
78 ↓		83 ↓		90 ↓		>126 ?	110 ↓	100 ↑	100 ↑	105 ↑	
72 ↓		72 ↓		91 ↕	97 z	85 ↕		81 ↓		85 ↓	
55 ↓		86 ↑	89 ↓	65 ↕	60 ↑	72 ↑		105 ↕		98 ↑	
69 ↕	47 ↑	65 ↑	73 ↑	72 ↑		73 ↑		76 ↑		89 ↕	84 ?
92 ↑	95 ↓	86 ↓	88 ↑	96 ↓	92 ↓	109 ↓	111 ↕	120 ↓	110 ?	102 ↕	121 ?
71 ↓		72 ↑		81 ↓		72 ↑	100 ↓	80 ↓		85 ↑	
72 ↕		83 ↓	114 ↑	97 ↓		89 ↓	93 ↓	97 ↕		86 ↓	
67 ↑		68 ↓		85 ↑	100 ↓	115 ↓	92 ↕	93 ↑		100 ↑	110 ↓
82 ↕		81 ↓		111 ↕	87 ↕	84 ↓		95 ↓		102 ↑	
84 ↕		96 ↕	90 ↓	101 ↓	89 ↓	77 ↕	86 ?	84 ↑		98 ↑	
<62 ?	73 ?	78 ↕		78 ↕	109 ?	89 ↑	88 ?	88 ↓		85 ↕	
73 ↓	89 ↕	75 ↕	81 ↕	51 ↕	74 ↕	98 ↑	122 ↓	77 ↑	126 ↓	105 ↓	105 ↑
65 ↓		58 ↓		77 ↓		81 ↑		98 ↑	128 ↓	132 ↓	113 ↑

H. M. 6 23	H. 7	H. M. 7 23	H. 8	H. M. 8 23	H. 9	H. M. 9 23	H. 10	H. M. 10 23	H. 11	H. M. 11 23	Midnight.
87 ↓		81 z		82 ↓		81 z		80 ↑		80 z	
74 ↑		78 ↑		83 ↑		73 ↑		78 ↑		78 ↑	
107 ↓		91 ↕		89 ↓		87 ↕		84 ↓		71 ↓	
125 z		102 z		105 ↓		99 ↓		86 ↓		79 ↓	
104 ↕		43 ↓		34 ↑		39 ↓		40 ↑		21 ?	
70 ↑		62 ↓		61 ↓		65 ↕		56 ↑		55 ↑	
62 ↕		62 ↓		64 ↓		66 ↓		61 ↕		66 ↓	
105 ↓		82 ↓		68 ↓		61 ↑		66 ↓		55 ↕	
82 ↑		79 ↑		69 ↓		73 ↓		69 ↓		53 ↓	
77 ↓		82 ↑		70 ↕		81 ↓		77 ↓		75 ↕	
78 ↑	70 ↑	70 ↓	68 ?	69 ↕	74 ?	71 ↑	71 ?	49 ↑	86 ?	85 ↓	
80 ↕		80 ↓		78 ↓		77 ?		71 ↕		79 ↑	
101 ↓	113 ↓	83 ↓	83 ?	91 ↓		71 ↓		77 ↕		81 ↓	
79 ↕	67 ↕	71 ↕	76 ?	73 ↓		77 ↑	76 ?	74 ↓		74 ↑	
90 ↓	60 ↓	64 ↑	69 ↕	69 ↑		74 ↑		<55 ?	63 ?	69 ↓	56 ↑
94 ↑	105 ?	91 ↓		87 ↓		84 ↑		73 ↑		64 ↓	
78 ↕		81 ↓		73 ↓	74 ?	68 ↓		<66 ?		69 ↓	<66 ?
78 ↓		75 ↓		76 ↑		81 ↕		82 ↑		79 ↕	
75 ↕		81 ↓		83 ↑		81 ↑		78 ↓	73 ?	73 ↓	
78 ↓	77 ?	77 ↕		82 ?		89 ↑		80 ↕		75 ↑	

General Remarks.

The aurora was observed hourly, after the magnetic and meteorological observations had been made; *i.e.* at from five to ten minutes after each hour.

No means were available for the instrumental determination of the altitude, &c., of arches; the information given on these points is by estimation.

The bearings given are true, not magnetic.

The situation of the Observatory was not altogether favourable for auroral observations high ground from north to east hiding the horizon to an altitude of 3° or 4° in the direction of the magnetic north. In other directions the view was uninterrupted.

The brightness is expressed by numerals on the scale 0 to 4. ·5 is rather brighter than the Milky Way. 4 is bright enough to see to read by.

The general colour of the aurora was greenish-yellow, not unlike moonlight, showing in the spectroscope a single line between the green and the yellow. This line was often visible on overcast nights, or when the spectroscope was turned to parts of the sky where no aurora was to be seen. When the brightness reached 1·5, prismatic colouring frequently showed itself, the lower edge of the arch generally assuming a violet or mauve colour, the upper edge retaining its yellow colour, which however looked at times almost green, probably by contrast.

On these occasions a faint continuous spectrum and several bright lines appeared towards the violet end of the spectrum. I once saw a bright band in the red.

It sometimes happened, however, that towards the end of a brillant display of aurora a crimson glow seemed to fill the air below the arch, of which it did not appear to form a part. This colour was very rich and beautiful, and quite different from the colouring of the aurora itself.

On the few occasions on which aurora was seen by daylight (*i.e.* after sunset, but before the stars had begun to be visible) it appeared of a pinkish, salmon, or copper colour.

The type of the aurora, and time of its appearance, was generally much the same on successive nights.

The displays were as a rule unattended by the slightest sound, but that a peculiar and distinct sound does occcasionally accompany certain displays of aurora, there can be no doubt. The Indians, and voyageurs of the Hudson's Bay Company, who often pass their nights in the open, say that it is not uncommon; a European who lives in a house may pass a lifetime in the country without hearing it. On one occasion I was fortunate enough to hear it myself. The sound was like the swishing of a whip, or the noise produced by a sharp squall of wind in the upper rigging of a ship, and as the aurora brightened and faded, so did the sound which accompanied it. This proves that the aurora could not have been distant, and I think it possible that these low auroræ may be of a different nature to the high ones.

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. September. h. m. A.M.	1882. September. d. h. m. P.M.				
3rd 5 38	2 9 15	Faint aurora in S.E. (1)			
— 6 23	— 10 0	Aurora through zenith N.W. to S.E., a moderately perfect arch, 150° in extent (2).			
— 6 53	— 10 30	Aurora broke up into patches of light			
— 7 3	— 10 40	„ moved 20° to S.W.			
— 7 8	— 10 45	„ disappeared			
6th 6 3	5 9 40	Three arches (1), alt. 60° N.W. to S.E.			
7th 6 33	6 10 10	Band of aurora N.W. to S.E., 20° in width, increased in brightness and assumed an E. and W. direction.			
— 7 23	— 11 0				
8th 5 56	7 9 33	Faint band N.W. to S.E.			
— 7 23	— 11 0	„ brightness (2)			
— 8 23	— 12 0	Ditto			
	A.M.				
— 8 43	8 12 20	Ditto			
— 9 23	— 1 0	Aurora in N.W. (1)			
— 10 23	— 2 0	Ditto			
— 11 23	— 3 0	Faint band, N.W. to S.E. (1)			
	P.M.				
9th 4 53	— 8 30	„ through zenith, N.W. to S.E.			
— 5 33	— 9 10	Ditto			
— 6 33	— 10 10	Band N.W. to S.E., alt. 30°			
— 6 53	— 10 30	Aurora 10° in width S.E. to N.W. through zenith			
— 7 23	— 11 0	Faint arch N.W. to S.E., alt. 20°			
	A.M.				
— 9 13	9 12 50	„ becoming brighter			
— 10 13	— 1 50	„ dying away			
— 11 8	— 2 45	Band of aurora N. to S.W.			
		Ditto S.W. to S.E., alt. 53°			
— 11 23	— 3 0	Ditto			
	P.M.				
10th 5 23	— 9 0	Faint auroral light E.S.E. (·5)			
— 5 53	— 9 30	„ disappearing			
— 6 3	— 9 40	„ reappeared, curtain-shaped, curved towards E.N.E.			
— 6 23	— 10 0	Aurora N.N.W. to E.S.E., alt. from 15° to 20°			
— 7 23	— 11 0	Arch, alt. 40° E. to S.W. (1) detached curtain N.E.			
— 8 13	— 11 50	„ fading			
— 8 23	— 12 0	Faint arch S.E. to S.W.			
	A.M.				
— 9 23	10 1 0	Band (1) N.N.E. to S.W.			
— 10 23	— 2 0	Faint aurora N.N.E. to S.W.			
— 11 13	— 2 50	Faint band N.W. to E.S.E., through zenith			
— 11 33	— 3 10	Wide band (1) N.N.W. to E.			
	P.M.				
11th 4 23	— 8 0	Faint band N.W. to E.			
— 5 23	— 9 0	Arch, N.N.E. to S.W. (1)			
— 6 23	— 10 0	Aurora, N.N.E. to S.W. (2)			
— 7 28	— 11 5	Broad auroral light in N.W.			
		Band, S.E. of zenith, nearly serpentine			
— 8 23	— 12 0	„ (1) N.W. to E.S.E., S.E. of zenith			
	A.M.				
— 9 23	11 1 0	Faint auroral light N.W. to N.E.			
		„ band N.W. to S.E., through zenith			
		„ auroral light through zenith E.S.E. to W.N.W.			
	P.M.				
13th 3 53	12 7 30	„ auroral light in S.E.			
— 5 23	— 9 0	Band of aurora in S.E. (1) alt. 10°, and under clouds			
— 6 13	— 9 50	Bright (3) prismatic-coloured curtain-shaped aurora, extending from S.E. to zenith.			
— 6 13	— 9 50	Band of aurora in N.W. (2) curtain-shaped			
— 6 23	— 10 0	„ became dim			
— 6 35	— 10 12	„ passed through zenith to S.W. and disappeared			
— 7 13	— 10 50	Aurora (3)			
— 8 23	— 12 0	Aurora visible through clouds			
	A.M.				
— 9 23	13 1 0	Aurora visible between clouds			

Göttingen Mean Time.	Local Mean Time.		II. F.	D.	V. F.
1882. September. h. m. A.M.	1882. September. d. h. m. A.M.				
13th 10 23	13 2 0	Aurora visible between clouds			
— 11 8	— 2 45	Faint patch of auroral light in E.			
	P.M.				
14th 4 48	— 8 25	Band S.E. to S.W.			
— 5 23	— 9 0	Faint band S.E. to S.W.			
— 6 23	— 10 0	Band (1) S.E. to S.W.			
— 7 23	— 11 0	Band, prismatic (2), E. to N.W.			
— 8 23	— 12 0	Faint auroral light N.W. to E.S.E.			
	A.M.				
— 9 23	14 1 0	Faint band N.W. to S.E.			
— 10 23	— 2 0	„ auroral light N.W. to N.E.			
— 11 23	— 3 0	Auroral light N.W.			
	P.M.				
15th 4 50	— 8 27	Faint auroral light in S.E. to alt. 30°			
— 4 55	— 8 32	Arch (1) S.E. to N.W., brightest on horizon to S.E., alt. to 12°.			
— 4 58	— 8 35	Light becoming more diffused, faint streamers in N.W.			
— 5 0	— 8 37	Very indistinct arch from above-mentioned bright patch to S.E., through Cassiopeia and γ and δ Ursæ Majoris.			
— 5 4	— 8 41	Arch becoming brighter, lower edge, which passes through Capella, sharply defined.			
— 5 7	— 8 41	A confused mass of curtain-shaped aurora below the arch on the horizon to E.S.E. (1).			
— 5 12	— 8 49	Above-mentioned aurora becoming brighter and moving to E.			
— 5 17	— 8 54	The Pleiades now in the centre of this patch of aurora; more aurora in N.W.; three parallel curtains, colour yellowish.			
		Spectroscope shows a single yellow-green line			
— 5 28	— 9 5	Narrow streak of aurora from near β Pegasi through zenith to within 10° of Arcturus.			
— 5 30	— 9 7	Curve of aurora from N.N.W. on horizon through ζ and η Ursæ Majoris to the E. of Cassiopeia.			
— 5 42	— 9 19	Bright patch of aurora between Cassiopeia and Saturn, a wave of bright light moving therefrom towards Ursa Major.			
— 5 52	— 9 29	A small patch of rapidly-moving aurora with faint vertical streamers near the horizon, below and to northward of Capella.			
		Aurora in N.W. now passes between ζ Ursæ Majoris and Arcturus, and above Ursa Major to Cassiopeia.			
— 5 57	— 9 34	Aurora moved from Cassiopeia to zenith			
— 6 2	— 9 39	„ moving to the southward and passing through α Lyræ.			
— 6 4	— 9 41	Another arch halfway between Ursa Major and the horizon (·5).			
— 6 8	— 9 45	Small patch of aurora (2) near Arcturus; the rest of the arch has a striated structure.			
— 6 12	— 9 49	There are now two principal arches, one from horizon to Arcturus, and Aquila to Pegasus, and 10° above S.E. horizon, the other from the latter point through Cassiopeia and ζ Ursæ Majoris to the N.W. horizon, an irregular curve from Cassiopeia through Taurus towards S.E. horizon; these are all moving slowly towards the S.E.			
— 6 22	— 9 59	Streamers on horizon to the E. just below Saturn			
— 6 27	— 10 4	Aurora on the E. horizon, increasing, striated, and with rapid motion; other arches less bright southernmost now 8° S.W. of Altair.			
— 6 33	— 10 10	Cloud of aurora 20° to 30° in width in the zenith and to S.E. and N.W.			
— 6 37	— 10 14	The whole sky more or less covered with faint aurora except to the S.W. from the horizon to about 12° alt.			
— 6 43	— 10 20	Aurora rather brighter and now extending from the zenith to E. and S. to 30° from horizon, fainter in N. and W.			

Göttingen Mean Time.	Local Mean Time.	——	H. F.	D.	V. F.
1882. September. h. m. A.M.	1882. September. d. h. m. P.M.				
15th 6 53	14 10 30	Arch from N.W. to S.E. through zenith (1)			
— 6 58	— 10 35	Arch from N. W. to E. (·5)			
— 7 2	— 10 39	Aurora very faint, except in S.E., where it is of a yellowish colour.			
— 7 7	— 10 44	Aurora very dim in all directions			
— 7 12	— 10 49	Arch on N.E. horizon passing between α and β Geminorum.			
		Steady band of auroral light about 10° higher			
— 7 23	— 11 0	The arch in the E. has risen about 5° and has almost disappeared.			
— 7 24	— 11 1	Three faint segments of auroral light in the N., and a few faint clouds of the same to S.W., about 30° alt.			
— 7 33	— 11 10	The above segments and faint clouds disappeared			
— 7 38	— 11 15	Arch from N.W. to S.E. (2) crimson and violet colours, and disappeared directly afterwards, except in N.W., which broke into patches (1), patches also in S.E.			
— 7 48	— 11 25	Serpentine aurora (1) from S.E. to N.W.			
— 7 50	— 11 27	Prismatic in N.W. (2)			
— 7 51	— 11 28	Serpentine aurora disappeared, except from N.W. to centre of zenith (3)			
— 7 55	— 11 32	Prismatic in N.W. to alt. 15° (mag. disturbance)			
— 7 56	— 11 33	Aurora disappeared, except a patch (2) in N.W. green, pink, yellow, and purple faint patch in S.E.			
— 7 59	— 11 36	Became dim and almost disappeared, except in N.W.			
— 8 0	— 11 37	Curtain-shaped aurora in N.W. (2) to alt. 10°			
— 8 1	— 11 38	,, ,, formed into an arch to S.E. (1)			
— 8 2	— 11 39	,, ,, became brighter			
— 8 4	— 11 41	Curved arch in the centre of zenith N.E. to S.W. (1)			
— 8 5	— 11 42	,, disappeared			
— 8 7	— 11 44	Faint aurora from N. to S.E. 10° from horizon, broke up and became curtain-shaped from N.W. to S. and from N. to E.			
— 8 9	— 11 46				
— 8 10	— 11 47	Aurora became very dim and nearly disappeared, except a patch in N.E.			
— 8 17	— 11 54	Faint patches of aurora in S.E., N., and S.W.			
— 8 21	— 11 58	,, disappeared			
— 8 23	— 12 0	Arch, N. to E. (1)			
	A.M.				
— 8 28	15 12 5	Aurora entirely disappeared			
— 8 45	— 12 22	Auroral light in N. and several patches in zenith			
— 8 50	— 12 27	Faint patch in N.W.			
— 9 0	— 12 37	Auroral light in N.E.			
— 9 7	— 12 44	Faint patch in N. and S.E.			
— 9 13	— 12 50	Auroral light in N., alt. 5°			
— 9 17	— 12 54	Very faint patch in N.W. horizon			
— 9 27	— 1 4	Auroral light in N. moving rapidly to E.			
— 9 33	— 1 10	,, disappeared, except a patch in N.			
— 9 39	— 1 16	Auroral band from N. to E.			
— 9 47	— 1 24	Faint patch in N.E.			
— 9 50	— 1 27	Ditto			
— 10 2	— 1 39	Ditto			
— 10 9	— 1 46	Faint band W. to N.E.			
— 10 18	— 1 55	Faint patch in N. to N.W.			
— 10 23	— 2 0	Very faint band S.E. to S.W.			
— 10 30	— 2 7	Remained stationary till 10.56			
— 10 57	— 2 34	Faint band from N.W. to E.			
— 11 17	— 2 54	Auroral light in N.W.			
— 11 25	— 3 2	Faint band from W. to E.			
— 11 40	— 3 17	Very faint band S.W. to S.E.			
	P.M.				
17th 5 23	16 9 0	Faint band S.E. to S.W.			
— 5 58	— 9 35	A bright diffused light in S.E. horizon			
— 6 23	— 10 0	Aurora band (1) E. to N.W.			
	— 11 0		393	340	
— 7 33	— 11 10	Faint patch of auroral light in S.E., alt. 5°			

Göttingen Mean Time.	Local Mean Time.	——	H. F.	D.	V. F.
1882. September. h. m.	1882. September. d. h. m.				
A.M.	P.M.				
17th 7 53	16 11 30	Band (1) S.E. to N.N.W., increasing in width and brightness until the whole sky was covered with rapidly-moving streamers of a reddish and green colour from S.E. to N.N.W. and S.S.E. to S.W. (3). (Great magnetic disturbance.)			
— 7 58	— 11 35	„ disappeared rapidly - - - -			
	— 11 43	- - - - - -	210	232	
	— 11 52	- - - - - - -	292	242	
— 8 28	17 12 5	Faint auroral light in S.E. - - - -			
	A.M.				
— 9 28	— 1 5	Band (1) in N.N.E. horizon with streamers pointing upwards.			
18th 10 33	18 2 10	Faint patch of aurora in the zenith, from N.W. to S.E. -			
	P.M.				
19th 5 18	— 8 55	Auroral light in S.E. to alt. 15° - - - -			
— 5 43	— 9 20	„ became brighter (1) and extended in an arch to N.W., where very faint.			
— 5 53	— 9 30	Aurora became faint in S.E. and brighter (·5) in N.W. -			
— 5 58	— 9 35	„ became very dim - - - -			
— 6 28	— 10 5	Auroral light from S.E. to N.W. through zenith - -			
— 7 23	— 11 0	Faint band from S.E. to S.W. - - - -			
	A.M.				
— 10 23	19 2 0	Faint patch and a streak in S.W. - - - -			
— 11 23	— 3 0	Faint patch of auroral light in S.E. - - -			
	P.M.				
20th 4 33	— 8 10	Faint arch from S.E. to N.W. - - - -			
— 5 23	— 9 0	Faint broad band S.E. to N.W. - - - -			
— 5 49	— 9 25	Aurora (1) with vertical streamers between δ and γ Ursæ Majoris, 5° E. of zenith, through Cassiopeia and Andromeda to S.E. horizon. An arch of auroral light somewhat brighter than above through Altair and Arcturus.			
— 6 23	— 10 0	Aurora as above, but with a more diffused light in N.E. horizon.			
— 7 23	— 11 0	Aurora (1) E. to S.W. 5° from zenith, with streamers in slight motion moving W., also a mass of light in E. which rapidly extended to W in a striated band (2).			
— 8 23	— 12 0	Faint auroral band in S.E. passing from zenith to S.W. -			
	A.M.				
— 9 23	20 1 0	Diffused masses of auroral light (1 and 3); one in the N. horizon from which streamers of pink and green colours were rapidly ascending, the other on the E. horizon rapidly sending out streamers until there was quite a canopy of light (2 to 3); these last were not coloured.	112	350	1414
9 28	1 5	(All the instruments slightly disturbed) - - -	390	320	1500
— 10 23	— 2 0	Diffused auroral lights in E. and W. (1) - -			
— 11 23	— 3 0	Bright streamers (2) in W. about 10° in width. Patch of auroral light in E.			
P.M.					
— 12 23	— 4 0	Patches of aurora from W. to E. (1 in W.) - -			
A.M.	P.M.				
21st 5 23	— 9 0	Arch (1) S. E. to N.W. - - - - -			
— 6 23	— 10 0	Patch in E. - - - - - -			
— 7 23	— 11 0	Arch (1) S.E. to N.W. and a wide patch of aurora from E. to zenith (2).			
— 8 23	— 12 0	Faint patches of auroral light in E. and W. - -			
— 8 53	21 12 30	Bright vertical streamers of a greenish colour (2) rapidly moving from E. to W.			
	A.M.				
— 9 23	— 1 0	Bright streamers (2) pink, green, and yellow, rapidly moving from S.W. to W. to 20° alt. Faint auroral lights in E.			
— 10 23	— 2 0	Prismatic, curtain-shaped aurora (3) rapidly moving from S.W. to E.			
22nd 8 38	22 12 15	Arch (2) from S.E. to S.W., with streamers in S.E.			

Göttingen Mean Time.	Local Mean Time.		H. F.	D.	V. F.
1882. September. h. m.	1882. September. d. h. m.				
A.M.	A.M.				
22nd 8 48	22 12 25	A second arch arising in N.E. horizon ascending gradually from the horizon to the zenith, clouds of light suddenly breaking forth and separating into rays which streamed upwards, at the same time moving backwards and forwards along the arch (4). (Magnetic disturbance.)			
— 9 17	— 12 40	Diffused and curtain-shaped aurora moving from zenith towards N., colours crimson, transparent yellow, emerald green, and scarlet.			
— 9 23	— 1 0	„ fading away, except a faint arch from E.N.E. to W.			
— 10 33	— 2 10	Band from N.E. to W. (1) - - - -			
— 10 38	— 2 15	„ separated into vivid rays converging at the zenith -			
— 11 23	— 3 0	Arch (1) from E. to N.W. - - - -			
	P.M.				
23rd 4 32	— 8 9	Faint arch from N.N.E. to N.W., about 10° alt. - -			
— 5 23	— 9 0	Faint patch in the S.E. horizon, about 5° alt. - -			
— 6 23	— 10 0	Faint band from S.E. to N.W. - - - -			
— 7 23	— 11 0	Diffused auroral light (1) in N.E. horizon - -			
— 8 23	— 12 0	Faint auroral light in S.E. - - - -			
	A.M.				
— 11 23	23 3 0	„ „ in S.W. - - - -			
24th 8 28	24 12 5	„ „ in E. to zenith, 10° in width - -			
	P.M.				
25th 3 43	— 7 20	Diffused auroral lights in N.W. extending to zenith -			
— 4 8	— 7 45	Band (1) from N.W. to 30° of S.S.E. Faint green patch in E.S.E.			
— 4 28	— 8 5	Bands (1) from N.W. to S.E. and N.W. to S.S.E. -			
— 7 23	— 11 0	Aurora visible through clouds on the zenith - -			
	A.M.				
— 9 23	25 1 0	Aurora emerging from the clouds in the S.W. horizon. It appears to be the termination of a bright band crossing the sky from S.E.; colour greenish.			
	P.M.				
26th 5 23	— 9 0	Faint band from N.N.E. to N.W. - - -			
— 8 23	— 12 0	Faint patches of auroral light in S.E. and N.W. -	367	368	
	A.M.				
— 8 53	26 12 30	Arch (1) from S.W. to S.E. 2° S. of zenith. (Great magnetic disturbance.)	220	270	
— 9 23	— 1 0	Faint diffused masses of auroral light in N.W. horizon -	306	300	
	P.M.				
27th 3 33	— 7 10	Faint auroral light in S.E. moving towards S.W. -			
— 4 23	— 8 0	Faint patches of aurora in S.E. and N.W. - -			
— 5 43	— 9 20	Faint arch, S.E. to N.W., 22° from N.W. horizon, drifting towards N.E.			
— 6 18	— 9 55	Diffused mass of aurora in N.W., slightly prismatic. (Bifilar very much disturbed.)			
28th 8 23	27 12 0	Diffused auroral light from N. through zenith to W. (1). (Instruments very much disturbed.)			
	A.M.				
— 9 43	28 1 20	Faint variegated band from S.E. through zenith - -			
P.M.					
29th 12 23	29 4 0	Patch of auroral light (1) in N.W. - - -			
October.					
A.M.	P.M.				
1st 5 58	30 9 35	Faint patches of aurora in zenith about 10° in width -			
— 6 22	— 9 59	Faint streak of aurora about 5° from zenith to N.W. horizon, about 20°.			
— 6 27	— 10 4	Faint arch through zenith, from N.W. to S.E. (·5). Parallel arch (·5) 5° to S.			
— 7 8	— 10 45	Arch (1) 30° alt. N.W. through zenith to about 30° alt. in S.E.			
— 7 17	— 10 54	A few faint streamers of aurora in S.E. between the moon and horizon.			
— 7 52	— 11 29	Aurora became very faint - - - -			
— 7 57	— 11 34	Patch in E. (1) about 5° alt. Faint patch in zenith -			
— 8 8	— 11 45	Broad arch (1) about 20° alt. N.W. to zenith, and extending in two arches to S.E. and E. horizon.			

Göttingen Mean Time.	Local Mean Time.		II. F.	D.	V. F.
1882. October. d. h. m.	1882. October. h. m.				
	A.M.	A.M.			
1st 8 27	1 12 4	Faint patches in zenith and N.W. horizon			
— 8 40	— 12 17	Faint streamers in N.W.			
— 8 45	— 12 22	Aurora disappeared except a faint broad patch about 10° alt. in N.W.			
— 8 57	— 12 34	Serpentine-shaped arch in N.W. about 10° alt., extending to zenith and from thence in streamers (1).			
— 9 0	— 12 37	Disappeared			
— 9 4	— 12 41	Broad diffused patch in zenith (1)			
— 9 5	— 12 42	Faint arch from N.W. to zenith			
— 9 15	— 12 52	Large circular-shaped patch in zenith (1). Patch in E.			
— 9 20	— 12 57	„ extending in a V-shape towards S.E. and in streamers to N.			
— 9 24	— 1 1	Irregular-shaped arch through zenith (·5)			
— 9 27	— 1 4	Faint auroral lights through zenith			
— 9 33	— 1 10	Streamers (1) 40° alt. in N.W. to 5° S.W. of zenith			
— 9 52	— 1 29	Aurora disappeared, except a faint patch 20° alt. in W.			
— 10 12	— 1 49	Streamers (1) of a greenish colour on W. horizon			
— 10 20	— 1 57	Streamers (1) 10° alt. W.			
— 10 23	— 2 0	Patches (1) from W. to S.E., 2° W. of zenith			
— 10 27	— 2 4	Aurora (1) from W. to S.E.			
— 10 29	— 2 6	„ diffused and slightly prismatic (2)			
— 10 35	— 2 12	Irregular masses of aurora (1) in N.W., moving towards S.E.			
— 10 39	— 2 16	Aurora from W. to N.E., 20° alt N.E., with vertical streamers (2).			
— 10 45	— 2 22	Patches on N.W. horizon			
— 10 47	— 2 24	„ very faint and moving towards S.W. horizon			
— 10 50	— 2 27	„ disappeared except a small patch in N.W. horizon			
— 10 55	— 2 32	Faint irregular arch from N.W. to 25° alt. N.E.			
— 10 57	— 2 34	„ disappeared			
— 11 3	— 2 40	Auroral light in N.W. horizon			
— 11 5	— 2 42	Faint arch N.W. to N.E.			
— 11 17	— 2 54	Patches of auroral light 15° alt. N.W.			
— 11 19	— 2 56	„ extending in irregular form towards N.E. horizon			
— 11 20	— 2 57	Very faint arch from W. to N.E., 15° N. of zenith			
— 11 33	— 3 10	Faint patch in N.W. horizon			
— 11 39	— 3 16	„ disappeared (clouds increasing)			
— 11 47	— 3 24	Patch 5° alt N.W., moving towards S.			
P.M.					
— 12 5	— 3 42	Faint streamers in N.W.			
A.M.	P.M.				
2nd 6 13	— 9 50	Arch (1) from S.E. to N.W. 3° S.W. of zenith			
— 6 33	— 10 10	„ passing through Aquila			
— 7 33	— 11 10	Diffused masses of auroral light of a greenish colour (1) in N.E. horizon, drifting towards N.W.			
— 7 53	— 11 30	Irregular-shaped arch (1) from S.E. to 50° alt. N.W., 2° N.W. of zenith.			
	A.M.				
— 8 33	2 12 10	Striated arch (1) from S.E. to N.W. passing through zenith.			
— 9 28	— 1 5	Aurora (1) 30° alt. from N.W. through zenith to S.E., and covering the whole sky; apparently near; motions rapid.			
— 10 28	— 2 5	Aurora (1) 10° alt. N.W., drifting rapidly towards N.E. and S.W. (All the magnetic instruments very much disturbed.)			
— 11 28	— 3 5	Streamers 20° alt. in S.W.			
— 11 53	— 3 30	Red glow below the arch			
P.M.	to				
— 12 8	— 3 45				
— 12 28	— 4 5	Faint arch from W. to E.			
A.M.	P.M.				
3rd 3 28	— 7 5	Arch (1) from S.E. to N.W. passing through zenith; slightly prismatic; green and pink colours in S.E.			
— 4 8	— 7 45	Diffused arch (1) S.E. to N.W., 5° N.W. of zenith, drifting towards N.E.			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. October. h. m.	1882. October. d. h. m.				
A.M	P.M.				
3rd 4 28	2 8 5	Diffused irregular-shaped arch (1) from N.W. to S.E., of a greenish colour in N.W. 7° S.W. of zenith, and drifting towards S. W. horizon.			
— 5 6	— 8 43	Diffused arch (1) from S.E. to N.W., 20° alt., slightly prismatic in S.E. (The bifilar very much disturbed.)			
	— 8 58	- - - - - - - -	212	422	550
— 5 23	— 9 0	Confused masses of aurora (2) N.W. to E. and S.E. from zenith to horizon.	152	400	700
	— 9 2	- - - - - - - - -	142	390	550
— 5 28	— 9 5	A bright patch halfway between α Arietis and horizon, another between α Pegasi and horizon, all striated and with a good deal of quivering and waving motion. (Bifilar and vertical force instruments chiefly disturbed.)			
— 6 30	— 10 7	Faint arch from N.W. to S.E. 10° S.W. of zenith -			
— 7 28	— 11 5	,, from S.E. through zenith to 20° alt. N.W. -			
— 7 58	— 11 35	,, from S.W to E. 10° alt. - - -			
	A.M.				
— 8 28	3 12 5	,, from S.W. to S.E. - - - - -			
		Arch from E. to N. (1) - - - -			
— 9 31	— 1 8	Serpentine arch (1) from N.W. through zenith (where brighter (2) and 5° in width) to N.E. (Declinometer slightly disturbed.)			
— 9 53	— 1 30	Patches of auroral light in N.W. - - -			
	P.M.				
4th 3 38	— 7 15	Arch (1) from N.W. to S.E. 10° alt. - - - -			
— 4 28	— 8 5	Faint arch from N.W. to E.S.E., streamers in N.W. (1) and in S.E. (·5).			
— 4 53	— 8 30	Wide diffused arch (2) from N.W. through zenith to S.E.			
— 5 3	— 8 40	,, moving slowly to S. of zenith and striated in S.E.			
— 5 28	— 9 5	Arch (1) from N.W. to E.S.E. about 15° alt. - -			
— 5 58	— 9 35	Aurora (2) in rapid motion 10° S. of zenith; prismatic. (Diminution of horizontal, and increase of vertical force.)			
— 6 13	— 9 50	Bright patches (2) in E.N.E. and N.W. horizon - -			
— 6 28	— 10 5	Bright arch (2) in horizon from N. to E. - -			
— 7 33	— 11 10	Arch (2) from E. to S.W. diffused in the E. horizon -			
	A.M.				
— 8 28	4 12 5	Masses of aurora, covering nearly the whole sky, prismatic, and streamers (2) from the zenith towards N.W., moving rapidly. (Instruments slightly disturbed.)			
— 8 43	— 12 20	Masses of aurora disappeared - - - -			
— 9 13	— 12 50	Arch from E. to N. W. through Ursa Major, prismatic (1)			
— 9 23	— 1 0	Ditto - - - - - - -			
— 10 23	— 2 0	Arch from N.E. to S.W. with a diffused mass of light in S.W. (1).			
— 11 8	— 2 45	Arch (1) from W. to S.E. 27° alt. S.W. - - -			
— 11 28	— 3 5	Aurora in S.W. horizon moving towards S.E. 23° S.W. of zenith.			
P.M.					
— 12 28	— 4 5	Faint patch in S.W. horizon - - - -			
A.M.	P.M.				
5th 4 33	— 8 10	Faint band from S.E. to W. 10° N. of zenith - -			
— 5 28	— 9 5	Arch from S.E. to zenith (1) - - - -			
— 6 23	— 10 0	Diffused mass of auroral light in E. horizon - -			
— 7 23	— 11 0	Faint arch from N.E. to S.W. 5° alt. - - -			
	A.M.				
— 9 8	5 12 45	Arch (1) from S.W. to S.E. 20° alt. - - -			
— 10 23	— 2 0	Faint patch in N.W. horizon - - - -			
— 11 28	— 3 5	Faint wide patch in N.W. and zenith - - -			
P.M.					
— 12 26	— 4 3	Faint arch from E.S.E. through zenith to W.N.W. -			
A.M.	P.M.				
6th 5 23	— 9 0	Sky overcast, but faint light in horizon to S. and E., showing auroral line in spectroscope. (Magnetic disturbance.)			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. October. h. m.	1882. October. d. h. m.				
A.M.	P.M.				
6th 6 23	5 10 0	Auroral line in S.E. horizon as before - - -			
— 6 43	— 10 20	Arch from N.W. to S.E., 20° S.W. of zenith partly seen through the clouds.			
— 6 47	— 10 24	Curtain-shaped aurora (2) from zenith towards S.W. horizon, in slight motion.			
— 7 28	— 11 5	Curtain-shaped arch (2) from E.S.E. through zenith to W.N.W., quivering arch (1·5) from S.E. to W.			
— 7 35	— 11 12	Bright prismatic streamers (3) rapidly moving from E.S.E. horizon to W. Streamers (2) N.W. of zenith. (Increase of vertical force.)			
— 8 0	— 11 37	Faint patches, in zenith only visible - - -			
8th 5 18	7 8 55	Sky overcast, faint light, probably aurora, in S.E. horizon			
	A.M.				
— 9 23	8 1 0	Faint arch from N.W. through zenith to S.E, - -			
— 10 23	— 2 0	Faint patch in N.W. horizon. Sky nearly overcast.			
— 11 23	— 3 0	Ditto - - - - - - -			
A.M.	P.M.				
9th 3 23	— 7 0	Faint aurora from E. to N.W. horizon, brightest portion in N.W.			
— 4 23	— 8 0	Two arches (1) from E. to N.W. parallel to each other, one about 4° alt., the other 23° alt.			
— 5 23	— 9 0	Faint arch from S.E. to N.W., 25° alt. - - -			
— 6 23	— 10 0	Faint arch from horizon to N.E. through Taurus to Ursa Major.			
— 7 23	— 11 0	Patch (1) in S.E. horizon. Faint streak in N.W. -			
	A.M.				
— 8 28	9 12 5	Faint diffused arch from S.E. through zenith to W.N.W.			
— 9 28	— 1 5	Arch (1) from E.S.E. through zenith to W.N.W. -			
P.M.					
— 12 23	— 4 0	Arch (1) from S.E. to S.W. - - - -			
A.M.	P.M.				
10th 4 28	— 8 5	Faint patch in N.W. horizon - - - -			
— 4 53	— 8 30	Bright (1) streamers in N.W. Aurora visible between clouds in S.E.			
— 5 28	— 9 5	Bright broad vertical patch (1) in S.E. Faint lights between clouds in N.W.			
— 5 43	— 9 20	Faint arch (·5) from S.E. to N.W. through zenith. Streamers (1) in N.W.			
— 6 3	— 9 40	Arch from S.E. to N.W. (1) through zenith - -			
— 6 28	— 10 5	Aurora in S.E., stretching across sky to S. of zenith (·5)			
— 7 33	— 11 10	Arch (·5) from S.E. through Cassiopeia to W. - -			
— 8 8	— 11 45	Prismatic canopy of auroral light (2) - - -			
	A.M.		{ 324	325	1687
— 8 23	— 12 0	- - - - - - - - -	{ 340	333	1177
			{ 265	310	1030
— 8 33	10 12 10	„ „ became brighter and more diffused (3). (Instruments disturbed.)			
— 9 23	— 1 0	Two faint bands from S.E. through zenith to W. -			
— 10 38	— 2 15	Two serpentine bands (2) S.W. of zenith to W. - -			
— 11 23	— 3 0	Faint arch from S.W. horizon to S.S.E., bright diffused patches in N.W. horizen moving towards the S.W. (Bifilar slightly disturbed.)			
P.M.					
— 12 23	— 4 0	Diffused masses of aurora in N.N.W. horizon, in rapid motion toward the zenith (1).			
— 12 33	— 4 10	Bright (3), slightly prismatic, and curtain-shaped aurora, drifting towards the N.E. horizon.			
A.M.	P.M.				
11th 3 33	— 7 10	Faint streak in zenith - - - - -			
— 4 32	— 8 9	„ „ remains stationary, and has become brighter			
— 5 32	— 9 9	Faint band from S.E. through zenith to W. - -			
— 6 23	— 10 0	Aurora, visible through the clouds, appears to cover the greater part of the sky. (Bifilar and vertical force very unsteady.)			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. October. h. m.	1882. October. d. h. m.				
A.M.	P.M.				
11th 7 38	10 11 15	Faint arch from S.E. to N.W. horizon, and several patches visible through clouds.			
	A.M.				
— 8 33	11 12 10	Arch (1) from N.E. horizon to S.W. horizon, and faint auroral light at zenith.			
— 9 23	— 1 0	Mass of auroral light in E. horizon apparently drifting towards the S.W. horizon. Sky nearly overcast. (An increase of vertical force.)			
— 10 23	— 2 0	Auroral light from S.E. horizon to E. (1) - -			
	P.M.				
14th 6 27	13 10 1	Aurora visible through the clouds at zenith - -			
— 7 23	— 11 0	Faint light through the clouds. Sky overcast - -			
— 8 23	— 12 0	Bright patch of auroral light (2) in the S.E., about 45° alt. Sky overcast.			
15th 6 20	14 9 57	Sky overcast, but faint light all over the sky showing yellow auroral line in spectroscope.			
— 7 55	— 11 32	Faint masses of auroral light in zenith and S.W., about 30° alt.			
	A.M				
— 9 45	15 1 22	Sky dark and clouded, light entirely disappeared -			
— 10 15	— 1 52	Sky overcast, but faint light from E. horizon to N.W. horizon.			
— 10 25	— 2 2	Patch of aurora (1), about 50° alt. in S.E. - -			
— 10 50	— 2 27	Patches in zenith visible between clouds - - -			
— 11 25	— 3 2	Masses of aurora in zenith and about 5° S. of zenith. Sky cloudy.			
P.M.					
— 12 15	— 3 52	Patches of aurora visible through clouds in S.E. horizon -			
— 1 10	— 4 47	Bright aurora (2) from S.W. to N.W. horizon, partly visible between clouds.			
— 1 30	— 5 7	Bright patch in S.W., about 50° alt. - - -			
A.M.	P.M.				
16th 4 23	15 8 0	Bright aurora (1) from S.W. to S.E., faint patches visible in zenith through clouds. Sky overcast.			
— 5 23	— 9 0	Aurora (1) from S.W. to S.E. - - - -			
— 7 33	— 11 10	Mass of auroral light extending from S.E. horizon to zenith. Visible through the clouds.			
	A.M				
— 10 43	16 2 20	Band from S.S.E. crossing the sky halfway between S.W. horizon and zenith to W. (2).			
— 11 23	— 3 0	Bright auroral light (2) in S. and S.W. horizon -			
P.M.					
— 12 23	— 4 0	Much the same - - - - - -			
— 1 23	— 5 0	Mass of auroral light (1) in N.E. horizon. The auroral light in S. and S.W. as above.			
A.M.	P.M.				
17th 4 28	— 8 5	Aurora visible between the clouds 3° S.W. of zenith -			
— 5 28	— 9 5	Aurora visible between the clouds S.E. of zenith - -			
— 6 29	— 10 6	Auroral light visible through the clouds. Sky overcast -			
— 7 28	— 11 5	Faint auroral light in N.E. horizon. Sky cloudy -			
	A.M.				
— 9 28	17 1 5	Auroral light (2) in W. and S.W. horizon. Sky overcast.			
— 10 28	— 2 5	Masses of aurora (2) from N.W. to zenith and from E. to N.W., drifting towards the S.W. horizon.			
— 11 23	— 3 0	Faint patch in S. and S.E. - - - -			
	P.M.				
18th 3 28	— 7 5	Arch (2) from E. to N.W., about 10° alt. A few streamers on N.W. horizon.			
— 4 23	— 8 0	Auroral light (1) from N.N.W. to W. horizon - -			
— 5 23	— 9 0	Auroral light from E. to N.W. horizon, visible between the clouds. Sky nearly overcast.			
	A.M.				
— 10 28	18 2 5	Sky nearly overcast, patches of aurora (1) visible between clouds S.W. of zenith.			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. October. h. m.	1882. October. d. h. m.				
A.M.	P.M.				
19th 6 28	18 10 5	Faint patch at the edge of a cloud in N.E. Bright streak (1) between clouds in N.			
	A.M.				
— 8 38	19 12 15	Bright band (2) from S.E. towards N.W., visible through clouds.			
P.M.					
22nd 12 23	22 4 0	Faint arch from E. to S.W., halfway between the horizon and zenith, visible between clouds. Sky overcast. (Magnetic instruments slightly disturbed.)			
— 1 23	— 5 0	Auroral light in S.E. horizon. Sky overcast - -			
A.M.					
23rd 10 31	23 2 8	Patches of auroral light in zenith and in S.W. horizon, visible between the clouds only for a few seconds, when the sky became completely overcast. (Instruments very much disturbed.)			
24th 9 23	24 1 0	Low arch (1) from N.W. horizon to S.W. horizon. Sky overcast.			
— 10 28	— 2 5	Parallel line (1) from N. to N.W. on horizon. Faint arch S.W. to W.			
	P.M.				
25th 6 28	— 10 5	Sky nearly overcast. Aurora visible between clouds S.E. of zenith (1). (Magnetic instruments disturbed.)			
26th 4 23	25 8 0	A greenish-coloured band (1) from S.E. through zenith to N.W.			
28th 6 28	27 10 5	Bright (2), prismatic, diffused aurora in S. and S.E., about 45° alt.			
— 7 40	— 11 17	Faint patch near zenith, W. - - - -			
November.					
1st 2 5	31 5 42	Faint arch (1) from N.N.W. to N.E., 15° alt. - -			
— 2 17	— 5 54	„ almost disappeared. Faint streamers in N.N.W. (·5).			
— 2 27	— 6 4	Arch brighter and lower, passing through Pleiades; brightest in N.E.			
— 2 35	— 6 12	„ disappeared, except a faint patch in N.E. -			
— 2 40	— 6 17	Arch reappeared (1) - - - - -			
— 2 58	— 6 35	„ increasing in width. Faint streamers in N.N.W.			
— 3 15	— 6 52	Arch very faint, except in N.E. - - -			
— 3 30	— 7 7	Arch bright (1), and streamers in N.W. - -			
— 4 0	— 7 37	Arch very irregular (1), bright broad patch in E.N.E. (2)			
— 4 25	— 8 2	Aurora very faint from N.W. to N.E. - - -			
— 5 5	— 8 42	Faint auroral lights in S.S.W. at the edge of a cloud. Arch in N.E. disappeared except a very faint light in N.N.W.			
— 5 25	— 9 2	Aurora entirely disappeared - - - -			
	November.				
	A.M.				
— 10 20	1 1 57	Diffused arch (1) from S.E. through zenith to N.W. horizon.			
— 10 30	— 2 7	Arch disappeared - - - - -			
— 10 35	— 2 12	Diffused light in N.W., drifting towards S.W., bright (2), slightly prismatic.			
— 10 40	— 2 17	„ disappeared, except a few faint streamers in the N.W. horizon.			
— 10 50	— 2 27	„ disappeared - - - - -			
— 11 0	— 2 37	Auroral light in zenith (1) - - - -			
— 11 8	— 2 45	Bright patch in N.W. horizon (2) - - -			
— 11 50	— 3 27	Faint arch from E.S.E. through zenith to W.N.W. (1) in N.N.W.			
— 12 10	— 3 47	Aurora disappeared - - - - -			
P.M.					
— 2 25	— 6 2	Streak of auroral light in N.E. horizon - -			
3rd 1 23	3 5 0	Arch from W.N.W. to N.E. (1) drifting S.W. -			
— 2 23	— 6 0	Auroral light in zenith, on S.W. horizon and on N.E. horizon (2).			
A.M.	P.M.				
5th 5 3	4 8 40	Auroral light in E. drifting N.E. - - - -			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. November. h. m.	1882. November. d. h. m.				
A.M.	P.M.				
5th 5 28	4 9 5	Faint arch from E. to N.W., 50° alt., the portion in N.W. visible through clouds.			
— 5 43	— 9 20	„ disappeared. Diffused mass of aurora in N.E., and drifting towards the N.W. horizon.			
— 6 23	— 10 0	Irregular arch (1) from N.E. to N.N.W., 15° alt. -			
— 7 23	— 11 0	Faint auroral light in S.E. (·5) - - - -			
	A.M.				
— 9 28	5 1 5	Faint horizontal streak (·5) in S.E., about 25° alt. -			
— 10 28	— 2 5	Small bright (1) patch in E. horizon - - -			
	P.M.				
6th 2 38	— 6 15	Auroral light in zenith and a faint arch from E.S.E. to N.W., 30° alt.			
— 3 23	— 7 0	Diffused arch from E.S.E. to N.N.W. (1), 20° alt. -			
— 4 16	— 7 53	Arch (1) from S.E. to N.W. through zenith, striated in N.W.			
— 4 28	— 8 5	Masses of aurora (1) in E. - - - -			
— 5 13	— 8 50	Diffused arch (1) from S.E. to N.N.W., 20° alt. - -			
— 5 28	— 9 5	Faint mass of aurora in N.E. - - - -			
	A.M.				
— 8 32	6 12 9	Faint arch from S.E. through zenith to W. - -			
— 9 23	— 1 0	Faint streak from zenith towards E. horizon - -			
P.M.					
— 12 23	— 4 0	Patches of aurora (1) in N.W. and N.E. - -			
— 1 23	— 5 0	Arch (1) from N.E. to W.S.W. through zenith - -			
A.M.					
7th 10 23	7 2 0	Irregular diffused arch (2) from W. to S.E. through zenith.			
— 11 23	— 3 0	Bright green-coloured patch (2), 20° alt. N.E. - -			
P.M.					
— 1 23	— 5 0	Faint streamers (1) in E. and N.W. Arch (1) from S. to S.W. on horizon.			
A.M.	P.M.				
8th 3 23	— 7 0	Faint arch from N.E. to W.N.W., 9° alt. - -			
— 4 23	— 8 0	„ very faint towards N.W. - - -			
— 6 23	— 10 0	Confused mass of aurora in zenith (1 to 2). (Great magnetic disturbance.)	350 422 406	388 396 415	1079 800 850
— 6 33	— 10 10	Patches of aurora in N.E. and N.N.W. (1) - -			
— 7 28	— 11 5	Large bright patch (2) in N.W. - - -			
		Irregular-shaped arch from N. horizon through zenith to 30° alt. S.E. (1).			
— 8 13	— 11 50	Bright striated patch (2) in N.W. horizon - -			
		Faint masses of aurora in zenith - - - -			
		Faint arch (1) from W.N.W. to S.S.E. - - -			
	A.M.				
— 8 28	8 12 5	Bright irregular arch (2) of a greenish colour, from N. horizon to S.E. horizon.			
— 9 13	— 12 50	Diffused arch (1) from E.S.E. to W.N.W. - -			
— 9 28	— 1 5	Bright arch (2) from S.E. to N.W. on horizon. Bright streamers (2) N.W. of zenith.			
— 10 18	— 1 55	Bright irregular-shaped arch (2) from S.E. to N.W. -			
— 10 28	— 2 5	Very faint arch from S.E. to N.W. - - -			
P.M.					
— 12 33	— 4 10	Faint arch from S.E. to W. - - - -			
— 1 33	— 5 10	„ has become brighter (1), and patches are appearing in N.E. horizon.			
— 2 30	— 6 7	Faint patches S.E. of zenith - - - -			
A.M.	P.M.				
9th 4 18	— 7 55	Faint patch of auroral light in N.E., 30° alt. Sky overcast.			
	A.M.				
— 11 13	9 2 50	Masses of aurora in zenith (1 to 2) - - -			
— 11 28	— 3 5	Faint streak in zenith. (Magnetic disturbance) - -			
P.M.					
— 12 23	— 4 0	Faint patches of aurora in N.N.W. - - -			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. November. h. m.	1882. November. d. h. m.				
P.M.	A.M.				
9th 1 23	9 5 0	(Great disturbance of the horizontal and vertical forces.)			
— 1 28	— 5 5	Diffused arch (2) from S.E. to N.W., 30° alt., and a bright patch in zenith.			
A.M.	P.M.				
10th 1 13	— 4 50	Sky overcast. Aurora visible between clouds in S.W. (1). Patch in N. (·5).			
P.M.	A.M.				
— 2 28	10 6 5	Faint auroral lights visible between clouds in S.E., 30° alt.			
A.M.	P.M.				
12th 1 28	11 5 5	Streamers (1) from N.N.E. to N.W., 15° alt. Slightly prismatic in N.W.			
— 2 28	— 6 5	Mass of auroral light (1) on E.S.E. horizon, patches also in zenith and in N.W.			
— 3 8	— 6 45	Bright streamers (2) in N.W. and (1) in S.E., green and pink in colour in N.W. Diffused auroral lights (2) in zenith, slightly prismatic. Faint patch (·5) 10° S. of zenith.			
— 3 28	— 7 5	Aurora very faint, except a few streamers S.E. of zenith, drifting towards E. (1).			
— 4 3	— 7 40	Faint arch (·5) from S.E. horizon to S.S.W. Streamers (·5) in N.W.			
— 4 27	— 8 4	Streamers (1) from S.E to S.W. slightly prismatic and moving rapidly towards N.W. Arch (2) from S.S.E. through zenith to N.N.W., 30° alt.			
— 4 53	— 8 30	Arch from E.S.E. through zenith to W.N.W., diffused in W.N.W. (1).			
— 5 28	— 9 5	Diffused arch from S.E. to N.W. (2) - - -			
— 5 57	— 9 34	Bright-irregular shaped arch (2) from E.S.E. through zenith to W.N.W.			
— 6 27	— 10 4	Faint arch (·5) on horizon from S.E. to S.W. Faint streamers in E.S.E.			
— 7 8	— 10 45	Bright (3) irregularly serpentine arch from E.S.E. to N.W., 70° alt., prismatic, striated, and with rapid motion. A faint crimson glow at times near the extremities of the arch, but not, apparently, forming part of it. Sky nearly covered with streamers more or less faint. (Much magnetic disturbance.)			
— 8 23	— 12 0	The whole sky covered with faint patches of light -			
	A.M.				
— 9 23	12 1 0	Faint arch 3° alt. in S.W. and a diffused light in zenith -			
— 10 23	— 2 0	A diffused light (2) in zenith - - - - -			
— 11 23	— 3 0	Patches of auroral light (1 to 2) in zenith and on S.W. horizon. A very bright patch on E.S.E. horizon drifting S.			
— 11 38	— 3 15	Arch (1) from S.E. to W.S.W., 30° alt. - - -			
P.M.					
— 12 23	— 1 0	Irregular-shaped arch (2) with streamers of a greenish colour from S.S.E. to W.S.W., about 27° alt.			
— 1 23	— 5 0	Arch from S.E. to S.W. (1), slightly prismatic. Masses of aurora in zenith and in N.N.W. of a greenish colour, very bright, and in rapid motion.	202 190 168	450 470 492	1933 1902 1863
— 1 28	— 5 5	The whole sky more or less covered with lights and streamers, apparently drifting in all directions.			
— 2 23	— 6 0	A mass of streamers (2) in zenith and masses of aurora in S.W. (Great magnetic disturbance.)	62 25 70	405 512 515	2027 2029 Off scale.
A.M.	P.M.				
13th 1 8	— 4 45	Arch (1) from W.S.W., through zenith to E.S.E., 30° alt.			
— 1 28	— 5 5	Irregular arch (1), from S.E. through zenith to 30° of N.W.			
— 1 50	— 5 27	Diffused arch (1) from E.S.E. through zenith to W.N.W. Curtain-shaped aurora (1) from S.E. horizon to S.W.			
— 1 58	— 5 35	The whole sky more or less covered with faint masses of auroral light.			
— 2 28	— 6 5	Irregular arch (1) from E.S.E. through zenith to N.W. Streamers in S.E. rapidly moving on horizon to W. Prismatic (2).			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. November. h. m.	1882. November. d. h. m.				
A.M.	P.M.				
13th 2 35	12 6 12	Bright (2) prismatic vertical streamers in S.E., extending in an arch to S.W., where curved and prismatic. Streamers in zenith slightly prismatic (2), in rapid motion, and quivering.			
— 3 23	— 7 0	Faint irregular masses of auroral light from E. horizon through zenith towards N.W.			
— 4 23	— 8 0	„ seen only through the clouds in zenith and halfway between N.E. horizon and zenith.			
— 5 23	— 9 0	Faint auroral lights, between clouds, S. of zenith and a streak through Cassiopeia.			
— 6 34	— 10 11	Aurora visible between clouds, 5° alt. in N.W. -			
— 7 28	— 11 5	Patches of aurora in S.W., 50° alt., drifting towards S. Sky nearly overcast.			
	A.M.				
— 8 28	13 12 5	Diffused mass of aurora on horizon in W.N.W., prismatic (2), from which many streamers were flowing, of a greenish colour, and drifting towards S.E. horizon, about 20° S.W. of zenith.			
— 9 23	— 1 0	Masses of aurora (2) from N.W. horizon, visible only at intervals. Sky overcast. (Much magnetic disturbance, especially the horizontal and vertical forces.)			
— 10 23	— 2 0	Auroral line (1) on horizon, from N.N.W. to S.W. Sky overcast. (Magnetic disturbance as before.)			
— 11 23	— 3 0	Faint patch of auroral light (·5) in S., 25° alt. - -			
P.M.					
— 12 23	— 4 0	Bright diffused light (1) from S.E. horizon to zenith. Faint arch on horizon S. to S.W.			
— 1 23	— 5 0	The whole of the sky from S.E. to S.W. covered with aurora (2) from horizon to 30° alt. Faint (1) streamers in E. Patch of auroral light (1) in N. horizon. (Much magnetic disturbance.)	50 62 102	510 450 479	Off scale. 2500 2249
— 1 28	— 5 5	Bright (3) streamers from S.W. to zenith, where prismatic, and extending in a circular shape and in rapid quivering motion to E. horizon.			
— 1 38	— 5 15	Aurora disappeared except a few faint lights in S.E. -			
— 1 40	— 5 17	- - - - - -			
— 2 13	— 5 50	Faint arch on horizon (1) from S.E. to S.W. Streamers from arch to zenith about 10° distant to extent of arch.	30	O.S.	O.S.
— 2 28	— 6 5	Arch (2) from S.E. to S.W. on horizon. Irregular arch (1) from E.S.E. through zenith to W.N.W. Faint streak of auroral light 10° alt. E.			
A.M.	P.M.				
14th 1 43	— 5 20	Faint arch formed of vertical streamers from N.E. to N.W., 6° alt.			
— 2 23	— 6 0	This arch now through zenith from E. to N.W. (1) -			
— 3 18	— 6 55	Bright auroral lights in S.E. and N.N.W., drifting towards each other.			
— 3 28	— 7 5	Arch (1) from E.S.E. to within about 5° of N.W. horizon, 35° alt. Bright streamers on N.W. horizon.			
— 4 23	— 8 0	Irregular arch (1 to 2) from W.N.W. to S.E., alt. 60° -			
— 5 20	— 8 57	„ more regular (1). Masses of aurora in E.N.E. and streaks in zenith.			
— 6 23	— 10 0	Patches of aurora on N.N.E. horizon and in S.W. (1) -			
— 7 23	— 11 0	Masses of aurora (1) in S., visible between clouds. Sky overcast.			
15th 6 0	14 9 37	Sky overcast but very light. Aurora probably behind clouds.			
P.M.	A.M.				
*— 12 20	15 3 57	Sky became dark - - - - -			
A.M.	P.M.				
16th 3 23	15 7 0	Faint arch (1) from N.E. to N.W., alt. 30° - -			
	A.M.				
— 10 23	16 2 0	Sky overcast, but very light; probably aurora behind the clouds.			

Göttingen Mean Time.	Local Mean Time.		H. F.	D.	V. F.
1882. November. h. m.	1882. November. d. h. m.				
P.M.	A.M.				
16th 12 23	16 4 0	Bright patch of aurora (1) in N.N.W. - - -			
— 1 23	— 5 0	Auroral light (1) from zenith to 10° alt. in N.W. -			
A.M.	P.M.				
17th 1 13	— 4 50	Arch of vertical streamers from E. to N.W. (1), of a crimson colour in N.W. and greenish in E.			
— 2 23	— 6 0	Faint patch (·1) on N.W. horizon - - -			
— 3 13	— 6 50	Faint streamers on N.W horizon - - - -			
— 4 23	— 8 0	Diffused mass of aurora on E.S.E horizon and auroral light on N.N.W. horizon, passing through zenith towards S.E. (1).			
— 5 23	— 9 0	Irregular arch (1) from E. to N.W., 30° alt. Faint arch from E.S.E. to W.N.W., and a few streamers in N.N.W.			
— 7 23	— 11 0	Faint auroral light (·5) from zenith to 30° alt. W. -			
— 8 28	A.M. 17 12 5	Arch (1) of streamers from S.E. to W. Faint patch in N.E.			
— 9 28	— 1 5	Very faint arch from S.E. through zenith to N.W. -			
— 10 28	— 2 5	Faint auroral light from S.E. to 10° S. of zenith (·5) -			
— 11 13	— 2 50	The whole sky covered with serpentine prismatic rays, crossing each other in all directions (3). (Great magnetic disturbance.)			
P.M.					
— 12 23	— 4 0	A greenish band from S.W. to N., and a right angle-shaped light on S.E. horizon (1 to 2).			
— 1 23	— 5 0	A diffused light on S.E. horizon - - -			
— 2 23	— 6 0	A few faint patches S.E. of zenith - - - -			
A.M.	P.M.				
18th 3 8	— 6 45	Arch from S.S.E. horizon to W. horizon, of a greenish colour in S.S.E. and dark red in W. (1).			
— 3 28	— 7 5	Arch of a dark red colour (2) from S.E. to S.W., 45° alt. Faint patches of auroral light in zenith (·5). Faint broad patch on N.W. horizon (·5).			
— 4 28	— 8 5	Aurora (1) from S.E. to S.W. on edge of cloud. Faint streamers in E.S.E. (·5).			
— 5 28	— 9 5	Faint streak (·5) S.E. of zenith. Masses of aurora (·5) from S. to S.W. on horizon.			
— 5 52	— 9 29	Bright (2) diffused arch from N.W. to S.E. Red, green, and purple in colour from N.W. to zenith.			
— 6 16	— 9 53	Bright streamers (1) from N.W. horizon to zenith, red, green, and purple.			
— 6 28	— 10 5	Streamers in S.E. and S. from horizon to zenith (1). A red and green-coloured patch on N.W. horizon (1).			
— 7 30	— 11 7	Faint patches of auroral light S.E. and N.W. of zenith -			
— 8 6	— 11 43	Bright (3) prismatic arch on E.S.E. horizon - -			
	A.M.				
— 8 27	18 12 4	Prismatic rays on E. horizon, and an elliptical-shaped light halfway between E. horizon and zenith; also patches of auroral light in different parts of the sky (2).			
— 8 58	— 12 35	A slightly prismatic band from Ursa Major through the zenith.			
— 9 23	— 1 0	Band from N.E. to S.W. (1) - - - -			
— 10 23	— 2 0	Sky nearly overcast. Auroral light visible between clouds in all directions.			
— 11 29	— 3 6	Masses of aurora (1) on E.N.E. horizon and in S.S.W. A faint light in zenith. (Magnetic disturbance.)			
P.M.					
— 12 23	— 4 0	Patch of aurora on N.N.W. horizon (1) - - -			
— 1 23	— 5 0	Auroral light in N.W. (1) - - - -			
— 2 28	— 6 5	Bright (2) auroral light on N.N.E. horizon, extending towards zenith.			
— 2 33	— 6 10	Faint patches in zenith - - - - -			
19th 2 23	19 6 0	No aurora. Sky darkly overcast. (Great magnetic disturbance.)			
A.M.	P.M.				
20th 6 28	— 10 5	Streamers (1) in N.N.W. drifting towards W., 40° alt. -			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. November. h. m.	1882. November. d. h. m.				
A.M.	P.M.				
20th 7 28	19 11 5	Faint patch, 10° alt., in S.S.E. (·5), and a faint streak in zenith (·5).			
	A.M.				
— 10 28	20 2 5	Faint patches in S. (·5), visible between clouds - -			
— 11 23	— 3 0	Faint patch in zenith (·5) - - - -			
P.M.					
— 2 23	— 6 0	A few faint streaks from N.N.W., converging at the zenith.			
A.M.	P.M.				
21st 1 18	— 4 55	Arch (1) from W. to S.E., about 20° S.W. of zenith, drifting towards N.E. horizon.			
— 1 31	— 5 8	Very faint arch from N.W. to E.S.E., 30° alt. - -			
— 2 23	— 6 0	Diffused irregular-shaped arch (1) from E.S.E. to N.W., drifting towards zenith, where it appeared to break into streamers and rays.			
— 2 38	— 6 15	Arch reformed from N.N.E. to N.W., the lower part of a reddish colour, and in rapid motion, 20° alt.			
— 3 11	— 6 48	Broad diffused bright arch (2) from S.E. through zenith to N.W., quivering and moving rapidly, and of a pink colour in zenith.			
— 3 18	— 6 55	Broad irregular arch (2) from E.N.E. to E.S.E., coloured violet, pink, and light green, 30° alt.			
— 3 23	7 0	- - - - - - - - -	396 376 340	348 360 361	1423 1461 1491
— 3 28	— 7 5	Very faint arch E.N.E. to E.S.E. - - -			
— 3 53	— 7 30	Faint arch from N.N.W. to E., 40° alt. - -			
— 4 28	— 8 5	Bright arch (1) from E. to E.N.E., 20° alt., of a pink colour in E. Irregular-shaped arch (1) from E.S.E. through zenith to W.N.W.			
— 5 28	— 9 5	Faint arch (·5) on horizon from E. to N.E. - -			
— 6 28	— 10 5	Faint irregular arch (·5) from E.S.E through zenith to W.N.W.			
P.M.	A.M.				
— 1 28	21 5 5	Auroral light (2) in W.N.W., 45° alt. - - - -			
A.M.	P.M.				
22nd 12 53	— 4 30	Faint diffused arch (·5) from E.S.E. through zenith to W.N.W.			
— 1 8	— 4 45	Bright (1) streamers from E.N.E. horizon to 5° E. of zenith.			
— 1 28	— 5 5	Faint arch (·5) from E.S.E. to E.N.E., alt. 10° - -			
— 6 23	— 10 0	Band (1) from E. through the moon to N.W. - -			
— 7 28	— 11 5	Irregular arch (1) from N.N.E. to N.W., alt. 10°. Auroral light in S.W. about 45° alt.			
	A.M.				
— 8 28	22 12 5	Arch very faint - - - - - -			
P.M.					
— 12 28	— 4 5	Very faint patches of auroral light in zenith - - -			
A.M.	P.M.				
27th 4 28	26 8 5	Faint patches of aurora (1) on S.S.E. horizon. Sky overcast.			
	A.M.				
— 8 30	27 12 7	Patch of aurora on N.N.E. horizon - - -			
— 11 28	— 3 5	Masses of aurora (1) from E. to N.W., of a yellowish colour, 3° alt. - - - -			
	P.M.				
28th 2 28	— 6 5	Faint arch (·5) from E.S.E. to E.N.E., 20° alt. - -			
— 3 13	— 6 50	Arch (1) from N.E. to N.W. - - - -			
— 7 28	— 11 5	Patch of aurora (1) 2° S.W. of zenith - - - -			
	A.M.				
— 8 28	28 12 5	Streak (1 to 2) from N.N.W. through zenith - -			
— 11 28	— 3 5	Faint arch from N.E. to W. - - - -			
	P.M.				
30th 5 28	29 9 5	Faint patch of aurora (·5) in E. horizon - -			
— 6 28	— 10 5	Faint arch (·5) from E.S.E. to W.N.W., 45° alt. Bright patch (1) on E. horizon.			
— 7 28	— 11 5	Band (1) from S.E. towards W., 6° S.W. of zenith -			
	A.M.				
— 8 28	30 12 5	A diffused light on N.W. horizon - - -			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. November. h. m.	1882. November. d. h. m.				
A.M.	A.M.				
30th 9 28	30 1 5	Diffused lights and patches (1) covering half the sky from N.W. and N.E. horizons.			
— 10 28	— 2 5	Diffused arch (1) from E.N.E. to W. - - - -			
— 11 28	— 3 5	Serpentine arch (2) from W. through zenith to E.S.E., with streamers of a greenish colour.			
P.M.					
— 12 28	— 4 5	Faint patch of aurora in zenith - - - -			
— 3 28	— 7 5	Bright streamers (1) from E. horizon to zenith - -			
December.					
A.M.	P.M.				
1st 1 25	— 5 2	Faint arch (·5) E.S.E. to W.N.W., 20° alt. -			
— 1 38	— 5 15	„ disappeared. Bright streak (1) in N., 10° alt.			
— 1 50	— 5 27	Faint light in N.W., 10° alt. (·5) - - -			
— 2 50	— 6 27	Arch (2) from E. to N.W., 2° N. of zenith - - -			
— 3 0	— 6 37	„ through zenith - - - -			
— 3 20	— 6 57	Bright (2) diffused arch from E.S.E. through zenith to W.N.W.			
— 3 40	— 7 17	Band (1) from S.E. to N.W., 6° S.W. of zenith - -			
— 4 0	— 7 37	Curtain of aurora through zenith from N.W. to S.E., about 40° in extent (·8).			
— 4 15	— 7 52	Aurora disappeared, except a faint arch (·5) from E.S.E. to W.N.W., 20° S. of zenith.			
— 4 20	— 7 57	Arch (·5) drifting towards S., slightly diffused in E.S.E.			
— 4 25	— 8 2	Diffused arch (·5) from E.S.E. to W.N.W., 4° S.W. of zenith.			
— 4 45	— 8 22	„ drifting towards zenith - - -			
— 4 55	— 8 32	Above arch very faint and through zenith - -			
— 5 10	— 8 47	„ brighter towards W.N.W. - - -			
— 5 25	— 9 2	„ bright, and 2° S.W. of zenith (1) - -			
— 5 35	— 9 12	„ disappeared - - - -			
— 5 45	— 9 22	Faint patch of aurora in E.S.E., 5° alt. - - -			
— 6 0	— 9 37	„ auroral light in S.W., 30° alt. - - -			
— 6 10	— 9 47	„ diffused - - - - - -			
— 6 20	— 9 57	Irregular arch (1) from S.E. to W., 40° alt. - -			
— 6 40	— 10 17	Arch (2) from E.S.E. to W., 6° S.W. of zenith - -			
— 6 45	— 10 22	Aurora much diffused, drifting through zenith, with much quivering motion and slightly prismatic.			
— 6 55	— 10 32	Band from E. through Ursa Major to N.W. (1) - -			
— 7 5	— 10 42	„ as above, and a diffused light in zenith; very faint.			
— 7 25	— 11 2	Above band less bright, and light disappeared - -			
— 7 35	— 11 12	Band disappeared - - - -			
— 7 40	— 11 17	Faint auroral light from W.N.W. through zenith - -			
	December.				
	A.M.				
— 8 25	1 12 2	„ auroral lights in zenith and in N.N.W. - -			
— 8 35	— 12 12	Patch of aurora (1) in N.N.W., 15° alt. - -			
— 8 45	— 12 22	Faint arch (·5) from E. to N.W., 10° alt. - -			
— 8 55	— 12 32	Aurora disappeared. Sky nearly overcast - - -			
	P.M.				
2nd 3 23	— 7 0	Auroral lights (·5) from E. to N.W., about 30° alt., drifting towards zenith.			
— 6 28	— 10 5	Diffused arch (·5) from N.N.W. to E.S.E., about 45° alt.			
P.M.					
— 12 43	2 4 20	Faint arch (·5) from N.N.E., to S.W. - - -			
— 1 23	— 5 0	Ditto - - - - - -			
A.M.	A.M.				
3rd 11 23	3 3 0	Faint arch from W. to S.E. (·5), 60° alt. - -			
P.M.					
— 12 28	— 4 5	Patch of aurora (·5) in N.N.E., 15° alt. - - -			
A.M.	P.M.				
4th 1 28	— 5 5	Faint streamers (·5) from E. to N. on horizon - -			
— 2 28	— 6 5	Diffused arch (1) from E. to N., 10° alt. - - -			
— 3 23	— 7 0	Arch (2) from N.E. to N.W., 10° alt. - - -			
— 4 28	— 8 5	Diffused arch from S.E. to W.N.W. and through zenith; more in the shape of curtains in S.E. (1·5).			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. December. h. m.	1882. December. d. h. m.				
A.M.	P.M.				
4th 5 13	3 8 50	Arch (2) from S.E. between Ursa Major and zenith to N.W., 50° alt.			
— 5 23	— 9 0	Arch (1) from S.E. between Ursa Major and zenith to N.W.			
— 5 36	— 9 13	Arch nearer zenith (2) - - - -			
— 6 33	— 10 10	„ through zenith and diffused (1) - - -			
— 7 28	— 11 5	Faint arch (·5) from N.W. to E.S.E., alt. 50°. Another arch (1) from the same points about 10° higher, drifting towards zenith.			
— 8 3	— 11 40	Lower arch much diffused (1) - - -			
	A.M.				
— 8 28	4 12 5	Masses of aurora in N.W. just above horizon, and on N.N.E. horizon, slightly prismatic. From these two points are four arches—(1st) about 20° alt. N.W.; (2nd) passing through zenith; (3rd) 10° S.W. of zenith; (4th) 50° alt. S.W.—all drifting towards zenith, with much quivering motion (·5 to 2). (Magnetic disturbance.)			
— 8 43	— 12 20	The whole sky covered with aurora - - -			
— 8 58	— 12 35	A few patches in zenith and in N.N.W., alt. 20° -			
— 9 28	— 1 5	Arch (·5) from W.N.W. to S.E., 50° alt., and a few patches in zenith and on N.N.E. horizon.			
— 10 28	— 2 5	Arch (1) from W.N.W. to E.S.E., 60° alt. - -			
— 11 28	— 3 5	Bright (1), broad, diffused arch from N.N.W. through zenith to 10° alt. E.S.E.			
— 11 58	— 3 35	Irregular-shaped arch (1) from E. horizon to N.W. horizon, 10° N.E. of zenith. Bright (1) streamers in W.N.W.			
P.M.					
— 12 28	— 4 5	Arch (1) from S.E. through zenith to S.S.W., where of a greenish colour.			
— 12 53	— 4 30	Faint arch (·5) from E.S.E. to W.N.W., 20° E. of zenith Ditto N.E., 25° alt. Patch in W.N.W. Bright (1) patch in zenith.			
— 1 28	— 5 5	Faint streak in S.W. (·5) - - - - -			
— 2 28	— 6 5	„ patches from S.W. to S.E. (·5) - - -			
A.M.	P.M.				
5th 3 18	— 6 55	Arch (1) from E. to N.N.W., 12° alt. - - -			
— 3 23	— 7 0	- - - - - - - - -	431 434 439	323 322 324	1395 1395 1400
— 3 28	— 7 5	Ditto (·5) - - - - - - -			
— 4 28	— 8 5	Arch disappeared - - - - - -			
— 4 53	— 8 30	„ from E.S.E. to N.W. (1), alt. 15° - - -			
— 5 28	— 9 5	Ditto (·5) - - - - - -			
— 6 28	— 10 5	Auroral light (·5) in N.N.W., 60° alt. - - -			
— 7 13	— 10 50	Arch (1) from S.E. to N.W., diffused in S.E., 45° alt. -			
— 7 28	— 11 5	Diffused arch from E.S.E. through zenith to W.N.W. (1), passing through α and β Geminorum and η Ursæ Majoris.			
— 7 53	— 11 30	„ „ very faint - - - - -			
	A.M.				
— 8 28	5 12 5	Bright (1) diffused arch from E.S.E. to W.N.W. (1) through zenith, increasing in width and brightness (2) till the whole zenith is covered with aurora.			
— 8 38	— 12 15	Aurora disappeared except in W.N.W., where are masses extending to N. (1).			
— 8 53	— 12 30	Arch from N. to E. (1), alt. 15°. Faint arch (·5) E.S.E. to W., 50° alt.			
— 9 28	— 1 5	Faint patch in W.N.W. - - - - -			
P.M.					
— 12 33	— 4 10	Two faint arches from S.E. to W. about 7° S.W. of zenith, and a bright column of light on N.N.E. horizon.			
— 1 33	— 5 10	Faint arch (·5) from S.E., half way between S.W. horizon and zenith, to W., and a faint band from W. to N.E. (·5).			
A.M.	P.M.				
6th 6 8	— 10 5	Faint arch (·5) from N. to E.S.E. through zenith -			

Göttingen Mean Time.	Local Mean Time.	——	H. F.	D.	V. F.
1882. December. h. m.	1882. December. d. h. m.				
A.M.	P.M.				
6th 7 23	5 11 0	Irregular, curved, curtain-shaped aurora about (2) and slightly prismatic, from E.S.E. to N.W., moving rapidly towards Ursa Major.			
	A.M.				
— 8 28	6 12 5	Irregular, diffused, and appearing like cumulus clouds from S.E. horizon to zenith, and there is a portion of an arch from W. towards N.N.E. slightly prismatic and moving rapidly.			
— 9 29	— 1 6	Arch from E. to N.W. through Ursa Major (2·5) -			
— 10 28	— 2 5	Faint patches all round zenith - - - -			
— 11 28	— 3 5	Patch of aurora in N.W., 20° alt. (·5), drifting toward N.E.			
— 12 28	— 4 5	Auroral lights (1) on N.W. and N.N.E. horizons - -			
P.M.					
— 2 28	— 6 5	Faint arch (·5 to 1) from N.N.E. to W.N.W., alt. 45°, brightest part in N.N.E.			
— 3 18	— 6 55	Arch (1) from E.N.E. to E., 30° alt. - - -			
A.M.	P.M.				
7th 1 28	— 5 5	„ „ E.S.E. to E.N.E., 15° alt. - - -			
— 2 28	— 6 5	„ „ „ N.E. curtain-shaped and of a greenish colour in N.E., alt. 25°.			
— 3 28	— 7 5	Arch from E. to N.W. through Ursa Major (1·5) -			
— 4 30	— 8 7	Arch (1) from E. to N.W., 60° alt., brighter on E. horizon (3), where another arch with vertical streamers appears extending along the N.E. horizon.			
— 5 31	— 9 8	Arch now halfway between zenith and N.N.W. horizon, and an intense light (3), curtain-shaped, on N.N.E. horizon.			
— 6 33	— 10 10	Faint arch (·5) from N.E. horizon to W.N.W. - -			
— 7 33	— 11 10	Aurora (1) in N.E., alt. 12° - - -			
	A.M.				
— 8 28	7 12 5	Irregular arch (1) from E. through zenith to N.W., very wide at zenith.			
— 9 23	— 1 0	Irregular arch very faint (·5) - - - -			
— 10 28	— 2 5	Auroral light (·5) in N.N.W., 50° alt. - -			
— 11 28	— 3 5	Irregular-shaped arch from N.N.W. to E. (1), alt. 30°. Faint light (·5) from S.E. horizon to 50° alt.			
P.M.					
— 12 28	— 4 5	Patches of aurora in E.S.E. (·5), and in N.N.W. (1) -			
A.M.	P.M.				
9th 3 28	8 7 5	Faint patches in W.N.W. (·5) - - - -			
— 5 28	— 9 5	Faint arch (·5) from W.N.W. through zenith to 60° alt. E.S.E.			
— 6 28	— 10 5	Faint light in zenith, arch (1) from S. to S.W., 20° alt. -			
— 7 30	— 11 7	Aurora visible between clouds about 15° N. of zenith and halfway between S.W. horizon and zenith.			
P.M.	A.M.				
— 3 28	9 7 5	Faint patches (·5) on horizon in E. and S.E. - -			
A.M.	P.M.				
10th 1 28	— 5 5	Streamers (·5) on E. and N.E. horizon - -			
— 2 28	— 6 5	Bright streamers (1 to 2) E.N.E. through zenith to E. -			
— 3 23	— 7 0	Faint arch (·5) from S.E. to N.W., 80° alt. - -			
— 4 23	— 8 0	Ditto - - - - -			
— 5 23	— 9 0	Ditto, also a faint patch from zenith towards N.W., and a few patches on S.E. horizon.			
— 6 23	— 10 0	Above arch has almost disappeared except in S.E., where brighter (1·5).			
		Another arch (1) from S.E. through zenith to N.N.W. -			
— 7 33	— 11 10	Three irregular arches (1) - - - -			
		1st, from E. to N.N.W. just below tail star of Ursa Major.			
		2nd, from same point, through zenith - -			
		3rd, through Orion and Taurus - -			
		A few detached streamers, more especially at zenith -			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. December. h. m.	1882 December. d. h. m.				
A.M.	A.M.				
10th 8 28	10 12 5	Arch (1) from E.N.E. to N.N.W., 10° alt., many streamers from N.W. to E.S.E. around, and reaching to, the zenith.			
— 9 28	— 1 5	Several streamers (1) from E. to N.N.W., alt. from 10° to 20°.			
— 10 28	— 2 5	Bright patch in N.N.W., 15° alt. - - -			
P.M.					
— 1 28	— 5 5	Faint (·2) arch from E.S.E. to W., 40° alt. - -			
— 2 28	— 6 5	Ditto and a few faint lights in zenith - -			
A.M.	P.M.				
11th 3 28	— 7 5	Streamer (1) in N.N.W., 15° alt. - - -			
— 3 43	— 7 20	Faint arch (1) from E.S.E. to N.W., 10° N. of zenith -			
— 4 28	— 8 5	„ „ only 5° N. of zenith and drifting towards it -			
— 4 53	— 8 ·30	Above arch, from E. to N.W. through zenith, striated, and reddish glow at both ends (1).			
— 5 28	— 9 5	Patch of aurora (·5) on E. horizon - - -			
— 6 28	— 10 5	Arch (1) from E. through zenith to N.N.W. - -			
— 7 18	— 10 55	Bright streamers, quivering and in rapid motion, prismatic (2) from S.S.E. to zenith, extending to S.			
— 7 23	— 11 0	Declinometer and vertical force disturbed - -	370 369 374	434 421 468	1766 1517 1415
— 7 28	— 11 5	Mass of aurora N.W. of zenith and in E., in irregular patches (·7).			
	A.M.				
— 8 28	11 12 5	Arch (5), 10° in width, from 30° alt. E.S.E. through zenith to 40° alt. N.N.W.			
— 9 28	— 1 5	Bright, diffused, and irregular-shaped arch from E.S.E., 5° S. of zenith to S.W. (1 to 2), and slightly prismatic E.S.E.			
— 10 28	— 2 5	Faint arch (·5) from E.S.E. to E.N.E., 10° alt. Faint patches in S.			
— 11 23	— 3 0	Bright patch on N.E. horizon and a light between the clouds halfway between S.W. horizon and zenith.			
P.M.					
— 12 30	— 4 7	Bright patch in N.W., emerging from the clouds. Sky nearly overcast.			
— 1 28	— 5 5	Bright patches on horizon in N.N.W. and E.S.E.			
— 2 28	— 6 5	Patch (·5) in N.N.W., about 15° alt.			
A.M.	P.M.				
12th 5 28	— 9 5	Faint arch (·3) from E.S.E. 5° S. of zenith to W.N.W. -			
— 6 28	— 10 5	„ ditto 15° S. of zenith - - - -			
— 7 28	— 11 5	Faint, streaky, auroral light extending about 10° S.E. and N.W. either side of zenith.			
	A.M.				
— 10 33	12 2 10	Diffused auroral light (·5) 2° S. of zenith - - -			
— 11 28	— 3 5	Arch (2), prismatic, from N.E. to S.W. through zenith, drifting rapidly towards N.W. (Magnetic disturbance.)			
P.M.					
— 12 28	— 4 5	Faint patches (·5 to 1) in zenith, in S.W. and in N.W.			
— 1 28	— 5 5	Patch of aurora on N.N.E. horizon partly seen through the clouds.			
A.M.	P.M.				
13th 5 29	— 9 6	Arch (·5) from N.E. to N.W., about 45° alt. - -			
— 6 30	— 10 7	Auroral light (·5) from Cassiopeia to W.N.W. - -			
— 7 33	— 11 10	Faint aurora (·5) in parallel streaks, 5° to 20° S.W. of zenith, from N.W. to S.E., about 30° alt. on either side.			
	A.M.				
— 8 28	13 12 5	Irregular arch (·5) from N.N.E. to N.W., alt. 15°; much aurora (·5) around and in zenith.			
— 9 28	— 1 5	„ arch as above. Streak of aurora in N.W., 20° alt. (1).			
P.M.					
— 2 28	— 6 5	Faint masses of aurora in E.S.E. and S. Patch (·5) in N.N.W.			
A.M.	P.M.				
14th 1 23	— 5 0	Arch (1) from N.E. to N.W., about 10° alt. - -			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. December. h. m.	1882. December. d. h. m.				
A.M	P.M.				
14th 2 23	13 6 0	Arch (1) brighter and some streaks above it in N.W. -			
— 3 28	— 7 5	Faint streaks in N.N.W., alt. 5° - - - -			
— 4 28	— 8 5	Arch (·5) from E. to N.N.W., 10° alt. - - -			
— 5 28	— 9 5	„ „ „ 20° alt. - - -			
— 6 28	— 10 5	Two irregular arches from E. to N.N.W., 1st, about 60° alt. (·5), 2nd, very faint and through zenith.			
— 7 18	— 10 55	Arch (·5) from E.S.E. through zenith to W.N.W. -			
— 7 28	— 11 5	„ „ drifted towards N.E., less bright except in E.S.E. Faint arch from E. to N.E., alt. 15°.			
	A.M.				
— 8 28	14 12 5	Arch (1) from E.S.E. to N., 35° alt. Faint lights from E.S.E. to zenith.			
— 9 28	— 1 5	Broad diffused arch (·5) from E.S.E. through zenith to W.N.W.			
— 10 28	— 2 5	Bright irregular arch (1) from 30° alt. E.S.E. through zenith, to 10° alt. N.N.W.			
P.M.					
— 12 33	— 4 10	Arch (1) from E.S.E. through zenith to W.N.W. - -			
— 1 23	— 5 0	Diffused arch from S.E., 2° S.W. of zenith to W. (1) -			
— 2 23	— 6 0	Aurora appearing like small cumulus clouds from S.E. horizon to zenith, extending to about 3° S. of zenith (1).			
— 3 28	— 7 5	A few faint streaks in zenith - - -			
A.M.	P.M.				
— 5 50	— 9 27	Faint band from N.E. to N.W., about 20° alt. - -			
— 6 0	— 9 37	„ „ brighter (1) in N.E. - - -			
— 6 10	— 9 47	Ditto - - - - - -			
— 6 20	— 9 57	„ disappeared except in N.E. Faint patches in zenith.			
— 6 30	— 10 7	Aurora very faint; the patches in zenith drifted to 10° alt. N.E.			
— 6 45	— 10 22	„ disappeared except a streak in N.W. - -			
— 7 0	— 10 37	Bright irregular-shaped arch (1) from E. to N.E., 10° alt. Bright (1) streak in N.W.			
— 7 5	— 10 42	Above arch alt. 45°. Aurora faint. Faint streak in E.S.E.			
— 7 10	— 10 47	Streaks disappeared. Faint arch from E.S.E. through zenith to W.N.W.; arch from E. to N.E. very faint.			
— 7 20	— 10 57	„ disappeared. Arch from E.S.E. to W.N.W. very faint. Faint arch (·2) through Cygnus, Cassiopeia, and Gemini. Slightly brighter patch in Leo.			
— 7 40	— 11 17	Arch through Leo (·5), passing halfway between Ursa Major and N. horizon.			
— 7 50	— 11 27	Aurora very faint - - - - - -			
— 8 5	— 11 42	Arch from N.E. to N.W., 45° alt. (1), and arch from S.E. to W. 2° S. of zenith (·5).			
— 8 15	— 11 52	Aurora disappeared except a faint patch 20° N.W. of zenith and a brighter patch in E. and S.E. (·5).			
	A.M.				
15th 8 25	15 12 2	Aurora disappeared - - - - -			
— 10 10	— 1 47	Arch from N.W. to E. through zenith (1) - -			
— 10 20	— 1 57	„ „ 5° S.W. of zenith (·5) - - -			
— 10 35	— 2 12	„ „ irregular in shape and through zenith (·5 to 1); brightest in N.W.			
— 10 50	— 2 27	„ „ (·5) and uniform - - -			
— 10 55	— 2 32	Aurora disappeared - - - - -			
— 11 10	— 2 47	Faint streak in zenith - - - - -			
P.M.					
— 1 30	— 5 7	„ in E.N.E., 40° alt. - - - -			
— 1 33	— 5 10	„ disappeared - - - -			
A.M.					
16th 8 28	16 12 5	Masses of aurora visible through clouds, from E. horizon to N.W. horizon up to zenith.			
— 8 38	— 12 15	Streak of aurora (1) about 60° alt. in S.S.W. through zenith to N.N.E., of a greenish colour, and faint patches on S.W. horizon, partly seen through clouds.			
— 9 28	— 1 5	Faint streaks in zenith and patches on S.W. horizon -			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. December. h. m.	1882. December. d. h. m.				
A.M.	A.M.				
16th 10 28	16 2 5	Irregular arch (2) from W. to E.N.E. through zenith, of green and reddish colours, drifting rapidly towards S.; also many streaks and patches from E. to S. along horizon; brightest in N.E. and N.W. (·5 to 2).			
— 11 28	— 3 5	From E.S.E. horizon to S.W. horizon, and from about 25° alt. to 30° alt., the sky covered with masses of aurora and streamers, varying from (·3 to 1·5); brightest in S.W. Serpentine arch from E. to 40° W.S.W. of zenith (1).			
— 11 43	— 3 20	Aurora disappeared, except a streak 15° alt. S.E. (·5) -			
— 11 58	— 3 35	Bright, confused, mass of aurora in N.N.W. (1 to 2). Bright streamers about 40° alt. S.S.W. (1).			
P.M.					
— 12 28	— 4 5	Irregular-shaped arch (·5) from W.N.W. horizon through zenith to 40° alt. E.S.E. Faint arch from N.N.E. to E., alt. 30°, and a faint patch in S.S.E.			
— 12 58	— 4 35	Faint patches in zenith. Cloudy - - - -			
— 2 28	— 6 5	Irregular arch (·5) from W.N.W. to E., 45° alt., faint streamers from E.S.E. horizon to 40° alt.			
— 3 33	— 7 10	Faint streamers from E. to S.W. - - - -			
17th 5 28	17 9 5	Patch of aurora (.5) from N.N.W. horizon to 45° alt. -			
A.M.					
18th 8 33	18 12 10	Arch from S.E. to N.W., 30° alt., and a patch halfway between the arch and zenith (1).			
— 9 28	— 1 5	Faint auroral light between S.E. horizon and zenith, visible through clouds.			
	P.M.				
19th 12 28	— 4 5	Faint streaks in E.S.E., 50° alt., and in W.N.W. 60° alt.			
— 2 28	— 6 5	Bright (1), green-coloured patch in E.S.E., 15° alt., faint streak in S.E., 45° alt.			
— 3 23	— 7 0	Two bright bands slightly prismatic (2) from S.E. to zenith.			
— 4 28	— 8 5	Auroral light (1) from about 7° alt. in S.E. through the moon towards W. horizon.			
— 5 28	— 9 5	Arch (1·5) from S.S.E. about 6° S.W. of the moon, to W. A faint diffused light from E. horizon to zenith.			
— 6 23	— 10 0	- - - - - - - - -	306 212 184	318 318 334	1397 1622 1960
— 6 26	— 10 3	Half the sky covered with bright, prismatic auroral light, moving and changing shape with great rapidity, the "curtain" shape prevailing, and of a crimson colour (3). (Bifilar and vertical force disturbed.)			
— 6 38	— 10 15	Aurora disappeared, except an arch from E.S.E. halfway between zenith and N. horizon to N.W., with streamers rapidly moving backwards and forwards upon it (2), and slightly prismatic.			
— 6 48	— 10 25	Above arch brighter (3), and no streamers - -			
— 7 28	— 11 5	Imperfect arch (1) from N.N.W. to N.E., alt. 8°, a brighter patch (2) just below Cygnus and another below Lyra.			
— 7 53	— 11 30	Arch (1) from N.N.W. to E. extending towards zenith, irregular in shape and very wide, about 15° alt.			
	A.M.	(Great decrease of horizontal and vertical forces.)			
— 8 28	19 12 5	Arch (1) from N.N.W. to E., very irregular, about 6° alt.; two other arches from N.N.W., 1st, through the moon, 2nd, about 10° above it, and about 45° alt. in S. (1).			
— 9 28	— 1 5	Patch of aurora (·5) on N.E. horizon, and a streak in N.N.W., 15° alt. (1).			
— 10 28	— 2 5	Arch (2) from N.N.W. through zenith to about 30° alt. in E.; faint patch in N.N.E., and another in N.W., about 3° alt.			
— 11 28	— 3 5	Faint arch from E.S.E. to S.W., 20° alt., small bright patch (1) on N.N.E. horizon.			
P.M.					
— 12 28	— 4 5	Faint streak in S.S.W., 30° alt. Faint arch (·3) from E.S.E. to 20° N.W. of zenith.			
— 1 28	— 5 5	Faint patch on E.N.E. horizon - - - -			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. December. h. m.	1882. December. d. h. m.				
P.M.	A.M.				
19th 2 28	19 6 5	Faint arch from E.S.E. to S.W., 35° alt. - - -			
A.M.	P.M.				
20th 3 28	— 7 5	Arch (·5) from E. to N.N.W., alt. 8° - - -			
— 5 28	— 9 5	Irregular arch (2), with a greenish glow, from E. to N.N.W., 30° alt.; another arch from the same point in N.N.W. to zenith, and of the same colour and brightness; both drifting towards N. horizon.			
— 6 28	— 10 5	Arch (·5) from E. to N.N.W., 15° alt. - - -			
— 7 3	— 10 40	Irregular-shaped arch (1) from N.N.E. to E.S.E., and from there extending to zenith.			
— 7 28	— 11 5	Faint band (·5) parallel to N.W. horizon, about 10° alt. Faint streamers in N.W. passing through Ursa Major and Cygnus.			
— 7 33	— 11 10	Above band brighter and about 5° higher - -			
	A.M.				
— 8 28	20 12 5	Bright, prismatic, streamers in N.N.W. and E.S.E. (2 to 3) in rapid motion, extending to zenith, and when meeting, the whole sky, from N.N.W. and E.S.E. to zenith, is covered with curtain-shaped aurora. (Horizontal and vertical forces disturbed.)			
— 8 31	— 12 8	Bright aurora (3) broken up into circles N.N.W. and E.S.E. of zenith, prismatic and in rapid motion.			
— 8 38	— 12 15	Bright aurora disappeared. Bright irregular arch (1) from N.W. to E.S.E., 20° alt., of a greenish colour in E.S.E.			
— 8 53	— 12 30	Irregular patch (·5) from 40° alt. in E.S.E. to zenith -			
— 9 28	— 1 5	Bright, broad, diffused arch (1) from N.W. through zenith to 40° of S.E.			
— 10 28	— 2 5	Faint masses (·3) on horizon from E. to E.N.E. -			
— 11 30	— 3 7	Faint auroral light 3° N. of zenith - - - -			
P.M.					
— 1 23	— 5 0	Faint streak through zenith - - - -			
— 2 23	— 6 0	Faint streaks and patches round zenith - - -			
— 3 13	— 6 50	Band (·5) on horizon from N.N.E. through W. to S.S.E., and an arch (1) from S.S.E. to N.N.W., 70° alt.			
— 3 28	— 7 5	Irregular arch (1) with a greenish glow, from E. to N.N.W. alt., about halfway between horizon and zenith, with streamers in rapid motion. Bright streaks in zenith. (Much magnetic disturbance.)			
— 3 53	— 7 30	Bright streak in N.N.W., 45° alt., and a few faint patches in zenith. Sky cloudy.			
A.M.	P.M.				
21st 1 38	— 5 15	A few streamers in S., 40° alt. - - - -			
— 2 38	— 6 15	Irregular arch (1) from S.E. to W., alt. 30°, with a greenish glow.			
— 3 28	— 7 5	Bright curtain-shaped arch (2) of a greenish colour, from W.S.W. to E.S.E., where curved towards zenith, alt. 20°. (Magnetic disturbance.)			
— 5 28	— 9 5	Masses of aurora (0 to 1) in E., alt. from 10° to 15°. Faint arch from E.S.E. to S.W., alt. 5° (·5) in S.W.			
— 6 28	— 10 5	Faint band (·5) parallel with horizon from E.S.E. to E., 5° alt., and faint masses S.W. of zenith.			
— 7 33	— 11 10	Irregular arch (1·5) from E.S.E. to W.N.W., 30° alt. -			
	A.M.				
— 8 28	21 12 5	Faint patches of aurora, like thin clouds, covering almost the whole sky.			
	P.M.				
22nd 4 23	— 8 0	Arch (1) from S.S.E. to W.N.W., 2° N. of zenith - -			
— 5 38	— 9 15	Arch (1·5) from E. to W.N.W., 30° alt. N. - -			
— 6 33	— 10 10	Diffused masses of auroral light (1) from N.N.E. to W.N.W.			
— 7 42	— 11 10?	Arch (1) from S.E. to N.W. just above Sirius, slightly prismatic, striated, and in rapid motion. Faint streak from N.W. horizon to Cassiopeia.			
	A.M.				
— 8 28	22 12 5	Mass of aurora on N.N.W. horizon, with an arch (1) from it to E., 10° alt., and wide streak to zenith.			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. December. h. m.	1882. December. d. h. m.				
A.M.	A.M.				
22nd 9 28	22 1 5	Faint streak on N.N.E. horizon - - - -			
— 10 28	— 2 5	Faint arch from N.N.W. to E.S.E., 8° alt., and a faint streak on N.N.W. horizon.			
P.M.					
— 3 23	— 7 0	Faint arch (·5) from N.N.E. to W.S.W., 5° N.W. of zenith.			
AM.	P.M.				
24th 4 28	23 8 5	Faint patch E.S.E. of zenith - - - -			
	A.M.				
— 9 23	24 1 0	Portion of a bright arch (2) visible through clouds about 20° N. of zenith.			
— 10 23	— 2 0	Irregular masses of auroral light in S.E. and N.W., prismatic.			
	P.M.				
26th 1 23	25 5 0	Faint arch (·5) from E.S.E. to N.W., about 35° alt. -			
— 7 28	— 11 5	Patches of aurora (·5) visible between clouds, about 5° S.E. of zenith.			
	A.M.				
— 9 28	26 1 5	Faint streaks (·2) N.W. of zenith, disappearing under clouds.			
	P.M.				
27th 1 28	— 5 5	Irregular arch (1) from E. to N.N.W., about 5° alt., striated, and in rapid motion.			
— 2 28	— 6 5	Ditto alt. 15 - - - - -			
— 4 28	— 8 5	Faint streamers (·5) from N.N.W. horizon to 40° alt. -			
		Faint patches (·5) visible between clouds in E.S.E. -			
— 5 28	— 9 5	Bright broad diffused arch (1) from N.N.W. horizon through zenith, to 20° alt. in E.S.E., disappearing under clouds, and a faint patch midway between S.W. horizon and zenith (·5).			
— 5 38	— 9 15	Above arch disappeared. Faint patches on N.N.W. and E.S.E. horizons.			
— 6 28	— 10 5	Faint arch from E.S.E. to N.E., about 10° alt. - -			
— 7 28	— 11 5	Faint streaks around zenith, and a mass of light on N.N.E. horizon.			
	A.M.				
— 8 29	27 12 6	Arch from S.E. through zenith to N.W. (1·5) - -			
— 9 28	— 1 5	Arch (1·5) from S.E. to N.W., alt. 20°, and a diffused light from Orion to W.			
— 10 33	— 2 10	Bright arch (2) from S.E. through the belt of Orion to W.S.W.			
— 11 28	— 3 5	Arch (1) from S.S.E. to N.W., alt. 75°, and a few streaks in zenith.			
P.M.					
— 12 28	— 4 5	Irregular arch (1) from S.S.E. to N.W., 5° S.W. of zenith.			
	P.M.				
— 1 28	— 5 5	Faint patches in E.S.E. - - - - -			
A.M.					
28th 1 28	28 5 5	Faint arch (·5) from S.E. to N.W., about 35° alt. - -			
— 2 28	— 6 5	Arch (1) from S.E. through Betelgeuse and Ursa Major to W.N.W.			
— 2 53	— 6 30	Arch (1) from S.S.E. to W.N.W., with a greenish glow and striated, about 10° S.W. of zenith, drifting rapidly through zenith to within about 20° alt. in N.E.			
— 2 58	— 6 35	The same arch (·5) from E. to N.N.W., alt. 20° - -			
— 3 28	— 7 5	Arch (1) from N.N.W. to E., 45° alt., with a few vertical streaks at the N.N.W. extremity, about 8° alt. (1).			
29th 4 28	— 8 5	Diffused arch (1) from N.N.W. to S.S.E. through zenith, and drifting towards S.W., striated and with a slight quivering motion.			
— 5 28	— 9 5	Arch (·5) from N.N.W. through zenith to E. - -			
— 6 28	— 10 5	Two arches, 1st from E. to N.N.W., 10° alt. (1), 2nd from E.N.E. to N.N.W., 5° alt. (·5).			
— 7 8	— 11 5	Faint arch (·5) from E.S.E. to W.N.W., alt. 15° in N. -			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1882. December. h. m.	1882. December. d. h. m.				
A.M.	A.M.				
29th 8 28	29 12 5	Bright broad diffused arch (1) from E.S.E. to N.W. through zenith, of a greenish colour in E.S.E.			
— 8 58	— 12 35	Masses of aurora (·5) between S.W. horizon and zenith -			
	— 12 36	- - - - - - - - - - - -	421	334	1079
	— 12 38	- - - - - - - - - -	410	345	1065
	— 12 42	- - - - - - - - - - - -	342	349	1014
— 9 7	— 12 44	„ disappeared, bright green-coloured patch (2), 5° alt. in N.W.			
— 9 28	— 1 5	Bright green patch (1) on N.E. horizon - - -			
— 10 28	— 2 5	Faint patch (·2) in S.E. Faint masses (·5) in N.E. Bright streak (1) in N.N.W., 10° alt.			
— 11 28	— 3 5	Arch (2) from S.E. through Procyon to W., diffused in S.E., slightly prismatic.			
P.M.					
— 12 28	— 4 5	Bright streak through zenith - - - -			
— 1 28	— 5 5	„ patch in S.E. horizon - - - - -			
— 3 28	— 7 5	Faint streak in E., 15° alt. - - - -			
A.M.	P.M.				
30th 1 38	— 5 15	Irregular arch (·5) from E. to N.N.W., alt. 5° - -			
— 2 28	— 6 5	Faint arch from E. to N.N.W. just above horizon, with a streak at N.N.W. extremity (1).			
— 3 28	— 7 5	Bright arch (1) from N.E. to E., 5° alt., striated, but immediately breaking up into patches, extending to E.S.E. and N. (·5).			
— 3 38	— 7 15	Faint patches in E.S.E., alt. 10° - - -			
— 4 18	— 7 55	Arch (·5) from E.S.E. to N., alt. 15° - - - -			
— 4 28	— 8 5	„ diffused and through zenith (1) in N. - -			
— 5 28	— 9 5	„ from E.S.E. through zenith to N.N.W. (0 to 1), diffused in N.N.W.			
— 6 28	— 10 5	Arch (·5) from E.S.E. through zenith to W.N.W. Patch (·5) on E. horizon.			
— 7 28	— 11 5	Faint arch (·5) from S.E. through the Moon, and 2° N. of zenith to N.W.			
31st 1 28	30 5 5	Bright diffused light (·8) on N.E. horizon - - -			
— 2 28	— 6 5	Faint patch on N.E. horizon - - - -			
— 3 23	— 7 0	„ diffused light in N.N.W. horizon - -			
— 4 28	— 8 5	Arch (1·5) from Procyon through Ursa Major to N.W. -			
— 5 28	— 9 5	„ (2) from S.E. between Procyon and Betelgeuse through zenith to W.N.W.			
— 6 28	— 10 5	Band (1·5) from S.E. through Procyon and Cassiopeia to N.W.			
— 7 28	— 11 10	Diffused arch (1) from N.N.W. through zenith to E.S.E. Mass of aurora (1) on horizon from E. to E.S.E. A fainter arch from same point to W. horizon, 25° S. of zenith.			
	A.M.				
— 8 28	31 12 5	Diffused arch from N.N.W. to E. through zenith (·5 to 1), faintest in zenith. Another arch (1) on horizon from E. to N.			
— 9 28	— 1 5	Mass of aurora on horizon from N.E. to N.N.W. (1), and a faint streak in N.W., 45° alt.			
— 10 28	— 2 5	Arch (1) from E.S.E. to N.N.W., 5° alt., and another arch (1) from about 25° alt. N.W., through zenith, to 15° alt. E.S.E.			
P.M.					
— 12 28	— 4 5	Faint irregular arch (·5) from E.S.E. to N.E., 10° alt. Faint patches 5° S.W. of zenith.			
— 1 28	— 5 5	Irregular arch from E.S.E. through zenith to N.N.W. (0 to 1), brightest in N.N.W.			
— 2 28	— 6 5	Faint arch (·5) from E.S.E. horizon, through zenith to 30° alt. in N.W.			
1883. January.					
A.M.	P.M.				
1st 1 8	— 4 45	Arch (1) from S.E. to N.W., about 4° alt. in N. -			
— 2 28	— 6 5	„ „ diffused in S.E., about 45° alt. - - -			
— 3 28	— 7 5	Faint arch from E. to N.N.W., 8° alt. - - -			
— 4 28	— 8 5	Arch (1) from E.S.E. to N.N.W., 20° alt., patch of aurora in N.N.W., 5° alt.			

Gottingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1883. January. h. m. A.M.	1882. December. d. h. m. P.M.				
1st 5 28	31 9 5	Arch (1) from E. to N.N.W., 10° alt. - - - -			
— 6 28	— 10 5	Faint arch from E. to N.N.W., 8° alt. - - -			
— 7 28	— 11 5	„ arch from E.S.E. to N.N.E., 15° alt. (·5) in E.S.E.			
	1883. January. A.M.				
— 8 27	1 12 5	Bright serpentine arch (1) from E.S.E. to W.N.W., alt. 15° N. Faint streak S.E. of zenith.			
— 9 27	— 1 5	Arch (·5) from E.S.E. to N.N.W., diffused, alt. 10° -			
— 10 27	— 2 5	Bright arch (1 to 2) from 40° alt. in E.S.E., through zenith to S.W., where diffused. Bright irregular masses (2) 5° S.S.W. of above arch -			
— 11 27	— 3 5	Arch (1) from S.E. to N.W., about 45° alt., and patches in W.N.W. (1).			
P.M.					
— 12 27	— 4 5	Faint patches in N.W. - - - - -			
— 1 27	— 5 5	„ patch in N. - - - -			
— 2 23	— 6 0	Nearly the whole sky covered with auroral lights, patches, and streaks. (Instruments disturbed.)			
A.M.	P.M.				
2nd 1 20	— 4 57	Arch (·5) from E.N.E. to N.N.W., 5° alt. - -			
— 1 30	— 5 7	„ disappeared - - - -			
— 1 41	— 5 18	Faint arch (·3) from E. to E.N.E., 5° alt. - -			
— 1 50	— 5 27	Ditto. ditto. - - -			
— 1 55	— 5 32	Faint arch from E.N.E. to N.N.W., 8° alt. - -			
— 2 0	— 5 37	„ irregular in shape and (1) - -			
— 2 10	— 5 47	„ Ditto. (·5) - - -			
— 2 30	— 6 7	Arch from same points, 10° alt. (·5) - -			
— 2 40	— 6 17	„ slightly diffused and irregular in shape - -			
— 2 50	— 6 27	„ „ „ (1) in N.N.W.			
— 3 0	— 6 37	Above arch confused, and from N. to E., 5° alt. - -			
— 3 15	— 6 52	„ „ from E.S.E. to N.N.W., 15° alt., and a streak in N.N.W., 8° alt. (1).			
— 3 20	— 6 57	Streak disappeared and arch very irregular - -			
— 3 35	— 7 12	Arch 10° alt. and (·5) - - - - -			
— 3 45	— 7 22	„ „ (1), another arch about 3° below, and a few bright streaks in N.N.W., 15° alt.			
— 4 0	— 7 37	Lower arch disappeared, upper arch slightly diffused (·5)			
— 4 20	— 7 57	Arch very faint and uniform - - - -			
— 4 35	— 8 12	Ditto - - - - -			
— 4 45	— 8 22	Ditto - - - - - -			
— 5 0	— 8 37	„ 15° alt. - - - -			
— 5 25	— 9 2	„ diffused and irregular (0 to 1) - - -			
— 5 30	— 9 7	„ disappeared. Patches (·5) in E.S.E. and N.N.E.			
— 5 37	— 9 14	Faint arch from S.E. to N.W., 60° alt. - - -			
— 5 45	— 9 22	Ditto - - - - -			
— 5 55	— 9 32	„ diffused and alt. 70° - - -			
— 6 10	— 9 47	„ regular, alt. 45° (1 to 2) - - -			
— 6 15	— 9 52	Double arch (·7) from E. to N.W., 12° alt., passing Leo, and just below η Ursæ Majoris.			
— 6 20	— 9 57	Arch now about 8° alt. (0 to 1) - - - -			
— 6 31	— 10 8	„ faint in N.W. - - - -			
— 6 40	— 10 17	„ „ (1) - - - - -			
— 6 55	— 10 32	Ditto - - - - -			
— 7 25	— 11 2	Double arch (·8) from S.E. to N.W., 45° alt. in N. -			
— 7 40	— 11 17	Segment of arch (·5) from E. horizon towards N., 8° alt.			
— 7 50	— 11 27	Fainter arch, about 3° above, and parallel with the last.			
	A.M.				
— 8 25	2 12 2	Arch (1) from E. to N.W., about 45° alt. - -			
— 8 50	— 12 27	„ fainter (·5) - - - -			
— 9 0	— 12 37	Ditto - - - - - -			
— 9 40	— 1 17	Ditto Mass of aurora (1) in N.N.W., alt. 25°, drifting towards W.			
— 9 45	— 1 22	Arch, now diffused and irregular from N.N.E. to W.N.W., 60° alt. (1).			
— 9 55	— 1 32	Arch much diffused and striated in N.W. - -			
— 10 5	— 1 42	Ditto. ditto. - -			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1883. January. h. m.	1883. January. d. h. m.				
A.M.	A.M.				
2nd 10 20	2 1 57	Arch very faint - - - - -			
— 10 35	— 2 12	„ disappeared - - - -			
— 10 50	— 2 27	„ (1) from E.S.E. through zenith to N.W. - -			
— 10 55	— 2 32	„ very faint - - - -			
— 11 0	— 2 37	„ striated, and drifting N. (1) - - -			
— 11 5	— 2 42	„ very faint except in N.W. extremity, and a patch on N.N.W. horizon (·5).			
— 11 10	— 2 47	Arch now 5° N. of zenith (1) in N.W., and striated. About (·5) in other parts.			
— 11 15	— 2 52	Arch disappeared. Two patches (1) in N.N.W., 45° alt.			
— 11 20	— 2 57	Patches in N.N.W., very faint. A faint patch on E.S.E. horizon.			
— 11 50	— 3 27	Patch in N.N.W., 45° alt. (1) - - - -			
— 12 0	— 3 37	Faint arch from N.N.W. to E., 10° N. of zenith -			
P.M.					
— 12 15	— 3 52	Faint arch disappeared - - - - -			
— 12 20	— 3 57	„ mass of aurora on horizon from E. to E.S.E. -			
— 12 30	— 4 7	„ patch only in E., 8° alt. - - -			
— 12 40	— 4 17	Arch (·5) from W.N.W. through zenith to E.S.E. Another arch 70° alt. (·5 to 1) from W.N.W. to about 50° alt. in S.E.			
— 12 50	— 4 27	Both arches very faint - - - - -			
— 1 0	— 4 37	„ „ disappeared. Faint streak in N.N.W., 45° alt.			
— 1 20	— 4 57	Mass of aurora in N.N.W., 45° alt., drifting to N. -			
— 1 35	— 5 12	„ „ disappeared - - - -			
— 3 30	— 7 7	Faint band (·3) parallel with horizon from N.N.E. to N.W., 10° alt.			
— 3 40	— 7 17	„ „ disappeared - - -			
A.M.	A.M.				
3rd 8 28	3 12 5	Arch (1) from N.N.W. through zenith to E.S.E., drifting towards S.			
— 9 28	— 1 5	Bright arch (1·5) from W. to E.S.E., alt. 70°, striated in E.S.E. with a quivering motion, and drifting towards W.			
— 9 48	— 1 25	Bright arch, very much diffused and passing through zenith. (Magnetic instruments slightly disturbed.)			
— 10 28	— 2 5	Bright streak just above N.W. horizon.			
P.M.					
— 1 28	— 5 5	Faint diffused lights in zenith. Faint arch from W.N.W. to E.S.E., 5° S. of zenith.			
— 2 28	— 6 5	Streak in E., alt. 20° (·5). Faint masses of aurora in S.W., 45° alt.			
A.M.					
4th 8 28	4 12 5	Arch (·5) from 10° alt. E.S.E. to 40° alt. N.N.W. through zenith.			
— 9 28	— 1 5	Bright diffused arch (1) from E.S.E. horizon, through zenith to N.N.W. horizon.			
— 10 28	— 2 5	Bright irregular arch (1) from E.S.E. horizon through zenith to W.N.W., slightly diffused in W.N.W.			
— 11 28	— 3 5	Arch (1) from S.E. to W. through Leo - - -			
P.M.					
— 12 28	— 4 5	Bright band from S.E. towards zenith, where it joins a canopy extending to W.N.W. and W.S.W.			
— 1 23	— 5 0	Aurora, like thin cumulus clouds, from S.E. to W.S.W., about 10° broad.			
	P.M.				
5th 2 28	— 6 5	Mass of aurora (·5) on E. horizon, and a streak in N.N.W., 5° alt.			
— 3 28	— 7 5	Bright arch (·8) from E. to N.N.E., where slightly diffused, 10° alt.			
— 4 28	— 8 5	Bright irregular arch (1 to 2) from E.S.E. to N.N.W., 20° alt.			
— 5 28	— 9 5	Double arch (1 to 2) from E. to N.N.W., alt. 10°, confused in E., diffused and brightest in N.N.W.			
— 6 28	— 10 5	Faint confused masses (·5) in zenith. Faint arch (·5) from E.S.E. to N.W., alt. 5°, diffused in N.W.			

Göttingen Mean Time.	Local Mean Time.		H. F.	D.	V. F.
1883. January. h. m. A.M.	1883. January. d. h. m. P.M.				
5th 7 28	4 11 5	Bright arch (2) from S.E. to N.W., about 50° alt., and another arch (·6) from S.E. to W., through Sirius, 45° alt. a faint diffused mass of light between the arches in W.N.W.			
— 7 48	— 11 25	The first arch has changed into 3 bands about 1° apart, the middle one pulsating from N.W. to S.E.			
— 8 28	5 12 5 A.M.	Confused masses of light in and all round the zenith; the sky from zenith to N. is nearly covered with hazy lights. (Instruments slightly disturbed.)			
— 9 28	— 1 5	Diffused arch (1·5) from S.E. through zenith to N.W., another faint arch from S.E. to W., passing about 2° above Sirius and through Rigel.			
— 10 28	— 2 5	Irregular arch (1) from E.S.E. to N.W., 3° N. of zenith, and the arch from S.E. to W. through the belt of Orion (1).			
— 11 28 P.M.	— 3 5	Irregular arch (·5) from E. to N.N.W., alt. 80°, striated in N.N.W. and drifting S.W.			
— 12 28 A.M.	— 4 5 P.M.	Faint streak on E.N.E. horizon and another streak in N.N.W., 5° alt. (1).			
6th 1 28	— 5 5	Faint streaks in E.S.E. and N.N.W., 5° alt. Faint mass of aurora in E., 45° alt.			
— 2 3	— 5 40	Bright diffused arch (1 to 2) from S.E. through zenith to N.W., slightly prismatic in S.E.			
— 2 28	— 6 5	Faint arch (·2) from S.E. to W.N.W., alt. 15° S. Faint diffused light on E.S.E. horizon.			
— 3 28	— 7 5	Arch (1) from E.S.E. to N.W. through Capella and Alcor.			
— 4 28	— 8 5	Band (1) from S.E. through Betelgeuse and Aldebaran to about 10° alt. in N.W.			
— 5 29	— 9 6	Arch (·8) from S.E. to N.W., about 70° alt.			
— 6 28	— 10 5	Arch from E.S.E. to N.W. through Leo and Alcor, very faint except in E.S.E., where bright and diffused; also arch (·7) from S.E. to W., about 50° alt. in S.			
— 7 8	— 10 45	Confused arch (2) from S.E. to N.N.W. through zenith, of a greenish colour striated and in rapid motion, drifting from S.E. to E. and from N.N.W. towards N.			
— 7 28	— 11 5	Arch, irregular from E.S.E. to N.N.W., 75° alt., without colour, and in slight motion. A few streaks in zenith (1).			
— 8 28	6 12 5 A.M.	Arch from S.E. to W.N.W., 65° alt., slightly prismatic, and with much quivering motion, drifting S.W.; another faint arch from N.N.W. to E.S.E., 10° S. of zenith.			
— 9 28	— 1 5	Band from S.E. through E. and N. to S.W., with vertical streamers drifting in all directions, lower edge of arch of a reddish colour with a greenish glow in other parts (2), 65° alt. A few streaks in zenith (1). (Slight magnetic disturbance.)			
— 10 28	— 2 5	Streak from N.N.W. to zenith (·5) - - - -			
— 11 28 P.M.	— 3 5	Bright, confused, and irregular arch (·5 to 1) from E.S.E. to W.N.W. through zenith. Faint irregular masses from S. to S.W., 2° alt.			
— 12 28	— 4 5	Arch (·5 to 1) from E. to W., brightest in E., 15° alt. in S. Faint patches in zenith. Diffused light in N.N.W.			
— 1 28	— 5 5	Above arch very faint and confused. Faint patch on N.N.W. horizon.			
— 2 23	— 6 0	- - - - - - - - - -	352	372	1438
— 2 28	— 6 5	Arch as above. Sky covered with diffused lights (·5 to 2) from N.N.E. horizon to N.N.W. horizon to zenith.			
— 2 38	— 6 15	Slight magnetic disturbance - - - - - -	206	418	1894
— 2 53	— 6 30	Masses of aurora from S.S.E. to S.W., 10° alt. Bright diffused light from E.S.E. to zenith (1). Bright green irregular patches in N.N.W. (1 to 2).			
— 3 2	— 6 39	- - - - - - - - - -	128	429	1362
— 3 23	— 7 0	- - - - - - - - - -	224	360	1450

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1883. January. h. m.	1883. January. d. h. m.				
P.M.	A.M.				
6th 3 28	6 7 5	The horizons in S. and W.S.W. to zenith are covered with auroral light.			
A.M.	P.M.				
7th 4 28	— 8 5	Irregular arch (·5) from N.N.W. to E.S.E., alt. 20°, and a few streaks in N.N.W. (·5), alt. 8°.			
— 5 28	— 9 5	Diffused arch (1) from N.N.W. through zenith to E.S.E. Irregular aurora (·5 to 1·5) from E.S.E. through zenith to about 6° alt. N.N.W., striated, and about 50° in width, brightest portion in E.S.E. Arch (·5) from E.S.E. to N.W., about 25° alt. in S.W.			
— 7 13	— 10 50	Bright, irregular, diffused arch (2) from S.E. to W., 5° S. of zenith. Arch (2) from E.S.E. through zenith to W.N.W. Another arch from E.S.E. to W.N.W., 5° N. of zenith (1 to 2). . Horizon covered with aurora (1) from E. to E.N.E. to 10° alt. Faint masses in S. and S.W., 5° alt.			
— 7 28	— 11 5	Two arches from E.S.E. to W.N.W., 1st, 30° S. of zenith (1 to 2), 2nd, from 20° to 30° N. of zenith (1). Bright, confused, patch (2) on E. horizon.			
	A.M.				
— 8 28	7 12 5	Bright diffused arch (2) from E.S.E. to W.N.W. through zenith, where 15° in width. Bright arch (1) from E.S.E. to E.N.E., 5° alt. Bright, confused, patch (1) between arches 45° alt.			
— 9 28	— 1 5	Irregular arch (·5 to 1) from E. to N., 5° alt., diffused and brightest in N.			
— 10 28	— 2 5	Arch (·5) from E.S.E. through zenith to 10° alt. N.W. Bright streamers (2) quivering and in rapid motion, prismatic 2° S. of zenith, from S.E. to W.N.W. extending to N.N.W., and forming into curtain-shaped aurora. (Bifilar slightly disturbed.)			
— 11 23	— 3 0	Sky nearly covered with masses of auroral light (2). (Horizontal and vertical force disturbed.)			
P.M.					
— 12 23	— 4 0	Arch from S.E. to W., 45° alt. in S., and patches in N.W.			
— 1 23	— 5 0	Arch (1) from S.E. to W., 45° in alt. in S. (1) - -			
— 2 23	— 6 0	,, fainter (·7) - - - - -			
— 3 28	— 7 5	A few streaks in S.S.W., 20° alt. (·5) - - -			
A.M.	P.M.				
8th 1 28	— 5 5	Mass of streamers in N.N.W., alt. 10° (·5 to 1) - -			
— 2 28	— 6 5	Irregular arch (·5) with streamers from N.N.W. to E.S.E., and a streak just above N. horizon (·5).			
— 3 28	— 7 5	Streak on N.N.W. horizon (1) - - - -			
— 4 28	— 8 5	Faint arch (·2) from E.S.E. to N.N.W., 45° alt., slightly diffused in N.N.W.			
— 5 28	— 9 5	Two arches, one from E.S.E. to W.N.W. through zenith, confused in E.S.E. (·5), the other from W.N.W. 5° S. of zenith to 40° alt. in S.E. (·5).			
— 6 28	— 10 5	Sky, from E.S.E. to S.E., 5° alt., to zenith, covered with aurora (1). Arch (1) from S.E. to S.W., 10° alt. (Magnetic disturbance.)			
— 7 31	— 11 8	Auroral lights visible through stratus clouds on N. horizon.			
	A.M.				
— 8 28	8 12 5	Ditto ditto ditto			
— 9 28	— 1 5	Arch from E. to N.W., about 40° alt. (·8), and lights visible through clouds on N.N.W. horizon.			
— 10 28	— 2 5	Streak (·4) 2° N.W. of zenith - - - -			
— 11 28	— 3 5	Irregular aurora from N.N.W. to E.N.E., alt. 10° (·5 to 1), brightest portion in N.N.W. and a mass of aurora in S.W., about 15° a t. Sky cloudy. (Instruments much disturbed.)			
P.M.					
— 12 28	— 4 5	Mass of aurora (·5) just above the N. horizon, and several faint patches along the horizon from N. to E.S.E. Sky cloudy.			
— 1 28	— 5 5	Several faint patches on S.W. horizon, visible between clouds.			
— 1 43	— 5 20	Faint irregular arch from N.W. to E.S.E., 5° S. of zenith -			
— 2 28	— 6 5	Faint aurora from E.S.E. to S.S.W., alt. 5° - -			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1883. January. h. m.	1883. January. d. h. m.				
P.M.	A.M.				
8th 3 28	8 7 5	Faint patch in N.N.W., alt. 5°. Bright light visible between the clouds in N.N.W., 50° alt. (1).			
A.M.					
9th 9 28	9 1 5	Much aurora (1) from N.N.W. through zenith to about 20° alt. in S.W., and 30° in width; partly visible between the clouds. (Magnetic disturbance.)			
— 10 28	— 2 5	Aurora (·5) from N.W. to E.S.E., 25° alt., partly visible between the clouds.			
P.M.					
— 12 28	— 4 5	Streak of a greenish colour (·8) in N.N.W., 10° alt., disappearing immediately.			
— 1 28	— 5 5	Arch (·3) from E.S.E. to W., alt. 10° in S.S.E. - -			
A.M.	P.M.				
10th 5 28	— 9 5	„ (1) from E.S.E. to N.N.W., 40° alt., and a mass of aurora on horizon, from E.N.E. to E.S.E. (·5), partly visible between the clouds.			
— 6 28	— 10 5	Irregular aurora (·5) from E.S.E. to N.N.W., 35° alt., and a mass of aurora from E. to E.S.E. just above horizon.			
— 7 28	— 11 5	Faint light, probably aurora, in E., 10° alt. - -			
	A.M.				
— 8 28	10 12 5	Ditto - - - - - - - -			
— 9 28	— 1 5	Sky overcast but light, probably caused by aurora -			
— 10 28	— 2 5	Faint patches visible between clouds in N.N.W., 10° alt.			
	P.M.				
12th 6 33	11 10 10	„ light through zenith, extending about 20° alt. E.S.E. and 15° N.W. of zenith.			
— 7 8	— 10 45	Arch (1·5) from N.N.W. to E., 80° N. of zenith, striated and pulsating from N.N.W. towards E.			
— 7 28	— 11 5	Irregular aurora from N.N.W. to E.S.E., 15° alt. - -			
	A.M.				
— 8 28	12 12 5	Mass of aurora (·5) just above horizon from E.S.E. to E.N.E., and an irregular arch from E.N.E. to N.N.W., 20° alt.			
— 9 28	— 1 5	Faint arch from E.S.E. to N.N.W., alt. 7°, and a faint streak on N.E. horizon.			
— 10 28	— 2 5	Patch of aurora (·5), 10° alt. N.N.W. - - -			
— 11 28	— 3 5	„ (·8) in N.N.W., 10° alt. - - - -			
P.M.					
— 12 28	— 4 5	Faint masses (·3) in N.E., 50° alt. - - -			
A.M.	P.M.				
13th 6 28	— 10 5	Patch of aurora (·5) in N.N.W., 8° alt., partly visible through clouds.			
	A.M.				
— 10 28	13 2 5	Faint arch (·2) from 5° alt. in N.N.W. through zenith to 60° alt. in E.S.E. Faint band parallel with horizon on edge of a cloud from E. to E.N.E. (·3), alt. 5°.			
— 11 28	— 3 5	Faint light in N.N.W., visible on edge of clouds -			
P.M.					
— 2 28	— 6 5	„ band (·4) from S.E. through zenith to N.W. -			
— 2 37	— 6 14	Another band (1) parallel with the first about 3° apart -			
— 3 28	— 7 5	Several streaks of aurora (1) from 8° alt. in N.N.W. through zenith to about 15° alt. in E.S.E. A faint streak just above the horizon from N.N.W. to N.W.			
A.M.					
14th 8 30	14 12 7	Bright band (2) from S.E. through Betelgeuse to W.N.W. pulsating from S.E.			
— 9 23	— 1 0	Arch (2) from S.E. through Leo and Pleiads to N.W. -			
— 10 23	— 2 0	Band (1) from S.E. to W.N.W., 50° alt. - -			
— 11 28	— 3 5	Irregular aurora from E.S.E. to N.N.W., 60° alt., about 20° in width. Streaks of aurora from N.N.W. horizon to zenith (·5).			
P.M.					
— 12 28	— 4 5	Irregular arch (1) from N.N.W. to E.N.E., alt. 45°, and a few streaks on E.S.E. horizion (·5).			
— 1 28	— 5 5	Two streamers (2) in N.N.W., 8° alt., and a faint irregular arch from N.N.W. to E.N.E., 30° alt.			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1883. January. h. m.	1883. January. d. h. m.				
P.M.	A.M.				
14th 2 28	14 6 5	Faint arch with streamers (1) from N.N.W. to S.S.E., 30° alt.			
A.M.					
— 10 45	— 2 22	Arch (1) from 60° alt. N.N.W. through zenith to 60° alt. E.S.E. Sky nearly overcast.			
— 10 55	— 2 32	Sky overcast. Aurora disappeared - - -			
— 11 30	— 3 7	Masses of aurora in N.N.W. (·5), alt. 50°, visible between clouds.			
— 11 40	— 3 17	„ disappeared - - - - -			
	P.M.				
16th 6 28	15 10 5	Faint mass of aurora on E.S.E. horizon, and a streak from that point 30° alt. (·5).			
— 7 28	— 11 5	Faint arch (·5) from E.S.E. through zenith to W.N.W. Another arch from E. to W.N.W., 50° alt. (·8).			
	A.M.				
— 8 28	16 12 5	Bright confused masses (1) about 5° N.W. of zenith. Bright streamers (2) from N.E. to E., prismatic, and rapidly moving towards E.S.E. and N.N.W. and forming into confused masses. Greenish in colour in E.S.E.			
— 8 53	— 12 30	Bright patches in N.N.W., alt. 5° (1) - - -			
— 9 28	— 1 5	Faint arch (·5) from E.S.E. to N.N.W., alt. 10° - -			
— 10 28	— 2 5	Faint streak (·3) in E.S.E., 10° alt. - - -			
— 11 28	— 3 5	Faint arch (·7) from N.N.E. to W., about 45° alt. -			
P.M.					
— 12 28	— 4 5	Faint band (·5) from N.E. to W., 3° N.W. of zenith -			
— 1 28	— 5 5	Faint arch (·5) from S.E. to W., about 55° alt. in S., and faint light about 3° N. of zenith, extending towards W., also particles in N.W. and E.			
— 2 28	— 6 5	Faint lights, like small cumulus clouds, covering three parts of the sky from N.			
A.M.	P.M.				
17th 6 28	— 10 5	Faint, confused arch from 20° alt. E.S.E. through zenith to 70° alt. N.N.W. (·4).			
	A.M.				
— 8 27	17 12 4	Faint patches in S.E. and N., about 30° alt. - -			
— 9 28	— 1 5	Faint masses of light from N.E., N., and N.W. to zenith.			
— 10 28	— 2 5	Masses of light round zenith - - - -			
— 11 28	— 3 5	Arch (·5) from W.N.W. to S.E., 20° alt. (Magnetic disturbance.)			
P.M.					
— 12 28	— 4 5	Arch (·5) from N.W. to S.E. 25° alt. Mass of aurora on N.N.W. horizon, alt. 6°, and several faint streaks in zenith.			
— 1 28	— 5 5	Arch (·5) from N.W. to S.E., 20° alt., about 6° wide. Another arch (·5 to 1) from E.S.E. through zenith to about 45° alt. N.W. (Instruments unsteady.)			
— 2 28	— 6 5	Faint arch from N.W. to S.E., 20° alt. Irregular arch (·5 to 1) from N.N.W. through zenith to E.S.E., and a streak (1) in N.N.E., alt. 15°, of a greenish glow. Several quaint streaks and patches from E.S.E. to N.N.W. on horizon.			
— 3 28	— 7 5	Faint patch (·5) in N.N.W., 20° alt. - - -			
	P.M.				
18th 5 28	— 9 5	Faint band (·7) from S.E. to N.W., passing between Procyon and Betelgeuse, and about 7° S. of zenith.			
A.M.					
— 5 38	— 9 15	Bright irregular light (2) from E.N.E. extending to Orion.			
— 6 23	— 10 0	Arch from S.E. to W.N.W., passing just above Rigel (1).			
— 6 58	— 10 35	Arch (1) from S.E. to N.N.W., 65° alt., drifting towards N. horizon.			
— 7 28	— 11 5	Arch (1) from E.S.E. to N.N.W., 15° alt. - -			
	A.M.				
— 8 28	18 12 5	Arch (1) from S.E. to N.W., alt. 20°, and another arch (1) from E.S.E. to N.N.E., alt. 8°, and a streak from N.W. to N., alt. 10°.			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1883. January. h. m.	1883. January. d. h. m.				
A.M.	A.M.				
18th 9 28	18 1 5	Irregular aurora (2) from E.S.E. through zenith to N.N.W., 15° in width, and much aurora on horizon from W. to S.E. (1). (Magnetic disturbance.)			
— 10 28	— 2 5	Faint arch from E.S.E. to N.N.W., alt. 10° - -			
— 11 28	— 3 5	Arch (·8) from E.S.E. to W., 15° alt. S. - -			
P.M.					
— 12 28	— 4 5	Arch, very faint. Faint streak on E.S.E., 20° alt. (·5) -			
— 1 28	— 5 5	Arch as above (·5) and slightly diffused in E.S.E. Faint patch (·8) in N.N.E., 5° alt.			
— 2 28	— 6 5	Diffused arch (·8) from E.S.E. to W.N.W., 50° alt. in S.			
A.M.	P.M.				
20th 7 28	19 11 5	Faint arch (0·2) from E. to N.N.W., 50° alt - -			
	A.M.				
— 8 28	20 12 5	Faint light in N.N.W. and N.E. - - - -			
— 9 28	— 1 5	Bright light (1·5) in zenith and another light from N. towards W. parallel with N.W. horizon (1), also patches in N.E.			
— 10 28	— 2 5	Faint arch (·5) from E.S.E. to N.W., about 40° alt. -			
— 11 28	— 3 5	Streak of aurora in N.N.W., (1) 25° alt. - -			
P.M.					
— 12 28	— 4 5	Patch of aurora (1) on N.W. horizon - - -			
— 1 28	— 5 5	Aurora (1) from 45° alt. in N.N.W. to zenith, 10° wide -			
— 2 28	— 6 5	Arch (·5) from W.S.W. to S.E., 35° alt., and a streak of aurora (1) from E.S.E. to zenith.			
— 3 11	— 6 48	Bright diffused arch (1) from E.S.E. through zenith to W., striated in E.S.E.			
— 3 28	— 7 5	Bright now from E.S.E. through zenith to W.N.W., where curtain-shaped and (1 to 2). Bright patch of irregular aurora (2) in W.S.W., 50° alt.			
A.M.	P.M.				
21st 3 28	— 7 5	Arch (2) from S.E. through Procyon and Ursa Major to N.W.			
— 4 28	— 8 5	Arch through zenith (1) - - - -			
— 5 28	— 9 5	„ „ diffused in N.W. (1) - -			
— 6 28	— 10 5	„ (1·5) from E. to N.W., about 50° alt., diffused in N.W.			
— 7 28	— 11 5	Arch (1) from E.S.E. to N.N.W., 60° alt., drifting towards S.			
	A.M.				
— 8 28	21 12 5	Arch (1) from E.S.E. to N.W., 45° alt., and two streaks from N.W. to zenith, striated (·5 to 1).			
— 9 28	— 1 5	Arch (1·5) from E.S.E. through zenith to about 8° alt. in N.N.W., with streamers of a reddish glow, and in rapid motion. (Magnetic instruments much disturbed.)			
— 10 28	— 2 5	Masses of aurora (1) from N.W. to N., alt. 10° - -			
— 11 28	— 3 5	Faint irregular arch (·5) from E.S.E. to E.N.E., 10° alt.			
P.M.					
— 12 28	— 4 5	Patch (1) in N., 20° alt. - - - - -			
— 1 28	— 5 5	Faint streak, (·5) in S.E., 45° alt. Masses of aurora (·8) in E., 10° alt.			
— 2 28	— 6 5	Faint patches of aurora (·5) in N.N.E., alt. 10° - -			
22nd 12 28	22 4 5	„ light about 7° S. of zenith - - -			
— 1 28	— 5 5	„ patch through Cassiopeia, and one in E. - -			
A.M.					
23rd 8 28	23 12 5	Patch of streamers in S.E. - - -			
— 9 28	— 1 5	The sky from E., N., and N.W. to zenith nearly covered with bright prismatic aurora, curtain-shaped and serpentine, and streamers in rapid motion, all drifting towards N.W. (2 to 3). (Instruments disturbed on the 2nd and 3rd readings.)			
— 10 28	— 2 5	Streak S.E. of zenith, and band from N.W. extending about 70° towards S.E., 45° alt. (1).			
— 11 28	— 3 5	Bright streak in N.N.W., 8° alt. - - -			
24th 9 35	24 1 12	Arch (·5) from N.W. to S.E., 30° alt. - - -			
	P.M.				
25th 2 28	— 6 5	„ (1) from S.E., just passing below Procyon and through Alcor to N.W. Another faint arch (·5) from S.E. to W.N.W. through Andromeda.			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1883. January. h. m.	1883. January. d. h. m.				
A.M.	A.M.				
25th 8. 28	25 12 5	Arch (·8) from E.S.E. to W.N.W., striated, and of a greenish colour in E.S.E., 30° alt. in S. Faint streak 5° N.N.W. of zenith (·5).			
— 9 28	— 1 5	Bright diffused arch (1 to 2) from E.S.E. to W.N.W., 60° alt. in S., brightest in E.S.E.			
— 10 28	— 2 5	Faint streak (·5) in N.N.W., 50° alt. - - -			
— 11 28	— 3 5	Prismatic, diffused, curtain-shaped light, extending from about 15° S.E. of zenith to N.W. (1·5).			
P.M.					
— 12 28	— 4 5	Light (1) in N.E., like a stratus cloud, and patches in N.W.			
— 1 28	— 5 5	Faint patch of streamers in N.W. - - -			
— 2 28	— 6 5	„ patches around zenith - - -			
— 3 28	— 7 5	Streaks on horizon from N.N.W. to E.S.E. (1) - -			
A.M.	P.M.				
26th 4 28	— 8 5	Faint diffused arch (·5) from 70° alt. E.S.E. through zenith to 60° alt. W.N.W.			
27th 3 28	26 7 5	Arch (1) from S.E. to N.W. through Leo and Ursa Major.			
— 4 13	— 7 50	Arch (2) through zenith, from S.E. to N.W., about 10° wide at zenith. (Horizontal and vertical force disturbed.)			
— 4 28	— 8 5	Three arches, one through zenith, and the others on either side, from S.E. to N.W. (2·5).			
— 4 35	— 8 12	Above three arches changed into one through zenith (2·5)			
— 5 28	— 9 5	Arch (1) from E.S.E. to N.W., 70° alt. - - -			
— 6 28	— 10 5	Faint arch (·7) from E. to N.W., alt. 45° - - -			
— 7 28	— 11 5	Arch (·5) from N.N.W. to E.S.E., 30° alt., and a faint patch from E. to E.S.E. on horizon.			
	A.M.				
— 8 28	27 12 5	Faint arch from N.N.W. to E.S.E., alt. 25° - -			
— 9 28	— 1 5	Irregular aurora from N.N.W. through zenith to S.E. (·5 and 1·5), brighest in S.E. (Magnetic disturbance.)			
— 10 28	— 2 5	Faint masses of aurora in N.N.W. and S.S.E., 20° alt., visible through clouds. Sky nearly overcast.			
	P.M.				
28th 4 28	— 8 5	Mass of aurora visible through clouds in N.E., 60° alt. Sky overcast.			
29th 5 28	28 9 5	Masses of aurora (·8), in N.N.E., 10° alt. - -			
— 6 28	— 10 5	Bright patch (1) on E. horizon - - - -			
— 7 28	— 11 5	Arch (1) from S.E. through zenith to N.W., and another from S.E. to N.N.W. (·8), about 40° alt.			
	A.M.				
— 8 28	29 12 5	Arch (1) from S.E. to N.W. through Leo and Pleiades.			
— 9 28	— 1 5	Serpentine light in zenith about 15° S.E. and N.W. of zenith (1).			
P.M.					
— 1 28	— 5 5	Arch (1) from N.W. to E.S.E., 65° alt., and vertical streaks in E., 8° alt.			
— 2 28	— 6 5	Irregular arch (2) from N.W. through zenith to S.E. (Magnetic instruments slightly disturbed.)			
A.M.	P.M.				
30th 3 28	— 7 5	Faint diffused light about 9° S.W. of zenith - -			
— 7 28	— 11 5	Arch (1·5) from N.N.W. to E.S.E., 30° alt., and a few streaks on horizon from E. to E.S.E. (1).			
	A.M.				
— 8 28	30 12 5	Mass of aurora from E. to E.S.E., 8° alt. - - -			
— 9 28	— 1 5	Streak of aurora (1) in N.W., 10° alt., and a patch in E.S.E., 5° alt.			
— 10 28	— 2 5	Arch from N.N.W. to E.S.E., 45° alt. (1), and arch from N.W. to S.E., 25° alt. (1).			
— 11 28	— 3 5	Bright patches of aurora in N., alt. 5° to 10° (1) -			
P.M.					
— 12 28	— 4 5	Faint patch in N.N.W., 10° alt. (·5) - - -			
— 12 33	— 4 10	Arch from W.N.W. through zenith to E.S.E. (·5) -			

Göttingen Mean Time.	Local Mean Time.	———	H. F.	D.	V. F.
1883. January. h. m. A.M.	1883. January. d. h. m. P.M.				
31st 2 28	30 6 5	Arch from S.E. to N.W., 30° alt. (1) - -			
— 3 28	— 7 5	Arch from N.N.W. to E.S.E., 5° alt., with streamers (1), irregular aurora (·5) from N.W. to S.E., 25° to 30° alt.			
— 4 28	— 8 5	Arch (2) from N.N.W. through zenith to E.S.E., striated in N.N.W. to 25° alt., other portions very faint. Faint arch from N.W. to S.E., 25° alt.			
— 5 28	— 9 5	Irregular arch (·5 to 1) from N.N.W. to E.S.E., 30° alt., brightest in N.N.W., and a faint irregular arch (0 to ·5) from N.W. to S.E., 25° alt., brightest in N.W.			
— 6 28	— 10 5	Irregular aurora from, N.W. through zenith to E.S.E., about 8° wide at zenith, drifting towards S.W. (1), and a mass of aurora (1) from E. to E.S.E., 5° alt.			
— 7 23	— 11 0	- - - - - - - - -	421	325	874
— 7 28	— 11 5	Bright arch (1 to 2) from E.S.E. to W.N.W., alt. 25° in S., also a bright irregular mass of aurora (1) in E.S.E., from 5° alt. to 60° alt.			
— 8 0	— 11 37	Sky more or less covered with aurora; an irregular arch (1·5) parallel with N.E. horizon, about 7° alt. (Magnetic disturbance.)			
— 8 3	— 11 40	- - - - - - - - -	261	212	1315
	A.M.				
— 8 28	31 12 5	Bright arch (2) from E.S.E. to N.N.E., 5° alt. Faint masses of aurora in S.S.E., 50° alt. (·5).			
— 8 58	— 12 35	Bright irregular masses of aurora parallel with horizon from N.N.E. to E., about 3° alt. (1).			
— 9 28	— 1 5	The sky, in W.N.W. to E.S.E. from horizon to zenith, covered with bright, diffused, and irregular masses of aurora (1 to 2), brightest on horizon. Bright arch (1·5) from E.N.E. to E.S.E., striated and irregular about 8° alt. Faint arch from S.E. to S.S.W. (·5), alt. 20°. (Magnetic disturbance.)			
— 10 1	— 1 38	Two arches, one from E.S.E. to W.N.W., 5° alt., diffused and irregular (1·5), the other from E.S.E. to W.S.W., 10° alt. (·8).			
— 10 28	— 2 5	Broad, bright, diffused, and irregular arch (2) from E.S.E. to N.N.W. through zenith, drifting towards S.W. Arch from E.S.E. to S.W., alt. 15° (1).			
— 11 28	— 3 5	Arch from S.E. to W., about 40° alt. in S. (1) - -			
P.M.					
— 12 28	— 4 5	Faint masses of light all over the sky - - -			
February.					
A.M.	P.M.				
1st 2 20	— 5 57	Arch (1) from N.N.W. to E.S.E., 15° alt. A few streamers in N.N.W., 8° alt.			
— 2 30	— 6 7	Arch very faint, alt. 15° (·3). Streamers faint (·5) -			
— 2 40	— 6 17	,, disappeared, except a very faint patch in E.S.E., 5° alt.			
— 2 50	— 6 27	Faint streak, (·5) in N.N.W. A few vertical streamers in E.N.E., 25° alt. (1).			
— 2 55	— 6 32	Streamers disappeared. Streak as before. Faint patches in E.N.E.			
— 3 5	— 6 42	The above has disappeared. Faint arch from N.W. to S.E., 25° alt.			
— 3 15	— 6 52	Ditto, and streak in N., 10° alt. (1) - - -			
— 3 25	— 7 2	,, disappeared. Very faint patch in E.N.E., 10° alt.			
— 3 35	— 7 12	Arch (·5 to 1) from E. to N.N.W., 8° alt., brightest in E. Another arch (·5) from N.W. to S.E., 27° alt.			
— 3 45	— 7 22	Arches as above, but of uniform brightness (1) - -			
— 4 0	— 7 37	Arch from E. to N.N.W. disappeared. Vertical streamers from E. to N.N.W., alt. 20° (1). Arch from S.E. to N.W. as before.			
— 4 10	— 7 47	Arch disappeared - - - - - - - -			
— 4 45	— 8 22	Two parallel streaks from N.W. towards S.E. (·7), 30° alt.			
— 4 55	— 8 32	Streaks now from W.N.W. pointing to zenith. Faint auroral light from S.E. towards zenith, 50° alt. (·2).			

Göttingen Mean Time.	Local Mean Time.		H. F.	D.	V. F.
1883. February. h. m. A.M.	1883. January. d. h. m. PM.				
1st 5 10	31 8 47	Faint diffused arch (·8) from S.E. through zenith to N.W.			
— 5 20	— 8 57	Arch very faint, and 5° S. of zenith - - -			
— 5 30	— 9 7	Ditto - - - - - - -			
— 5 35	— 9 12	Faint streamers in N.N.W. from Cassiopeia to horizon (·5). Segment of arch from same point towards Ursa Major (·7).			
— 5 50	— 9 27	Faint segment of arch (·3 to ·7) from E.S.E. through zenith to N.N.W.; diffused in N.N.W., where brightest. A few streamers (·3) from horizon to about 10° alt. in N.N.W.			
— 6 0	— 9 37	Ditto - - - - - - -			
— 6 10	— 9 47	Streamers disappeared. Arch very faint in N.N.W. and (·5) in E.S.E.			
— 6 20	— 9 57	Arch from E.S.E. to N.N.E., 60° alt. (1), in E.S.E. to 40° alt., the rest very faint.			
— 6 30	— 10 7	Above arch from E.S.E. to N.N.W., 70° alt. (·3 to ·7). Faint streak in W.N.W., 30° alt.			
— 6 40	— 10 17	The above disappeared. Arch from S.E. through Leo and Cassiopeia to N.W. (·7).			
— 6 50	— 10 27	Arch diffused - - - - - - -			
— 7 0	— 10 37	„ very faint - - - - - - - - -			
— 7 10	— 10 47	„ disappeared from zenith to N.W. - - -			
— 7 25	— 11 2	„ through zenith, to 30° alt. in N.W. - - -			
— 7 40	— 11 17	„ disappeared. Faint streak through zenith - -			
— 7 45	— 11 22	Faint arch (·2) from S.E. to W.N.W., 7° S. of zenith -			
— 8 0	— 11 37	Aurora disappeared - - - - - -			
— 8 10	— 11 47	Faint streamer in E., from 5° to 25° alt. (·3) - -			
	February. A.M.				
— 8 35	1 12 12	Faint patch in N.W., 45° alt., and faint light from S.E. extending to Procyon.			
— 8 45	— 12 22	Ditto - - - - - - -			
— 9 0	— 12 37	Patch of aurora as above. Irregular arch from N.N.W. to E.S.E., 80° alt. (1).			
— 9 10	— 12 47	Ditto and a few detached streamers in N., 45° alt. (1·5).			
— 9 25	— 1 2	Arch now uniform and from N.N.W. to S.E., 80° alt. (·8)			
— 9 35	— 1 12	Ditto - - - - - - -			
— 9 15	— 1 22	Arch disappeared. Faint streak from zenith towards N.W., and two faint streaks in S.E., from 20° to 45° alt.			
— 9 55	— 1 32	Aurora very faint - - - - - -			
— 10 10	— 1 47	Faint streaks only from S.E. to zenith - - - -			
— 10 20	— 1 57	Arch from S.E. to N.W., 40° alt. (·5 to 1), brightest in S.E.			
— 10 30	— 2 7	Arch from S.E. to W.N.W., 20° alt. (·5), and another faint arch just below from the same points.			
— 10 45	— 2 22	Above arches both very faint - - - - -			
— 11 0	— 2 37	Upper arch, brighter and striated, lower one as before			
— 11 20	— 2 57	Curtain-shaped arch (2) from S.E. to N.W., slightly prismatic, pulsating backwards and forwards, and drifting towards zenith, 45° alt. in S.			
— 11 30	— 3 7	Curtain-shaped arch extending N.W. and S.E. through zenith, and with a circular motion, slightly prismatic (2).			
— 11 35	— 3 12	Curtain-shaped arch from S.E. to N.W. through zenith, and 15° wide in zenith (1 to 2).			
— 11 45	— 3 22	Sky nearly covered with faint aurora, the curtain shape most prevailing.			
— 11 50	— 3 27	Arch (·7) from S.E. to W.N.W., 45° alt. in S., and a curtain-shaped light, slightly prismatic in N.N.W., moving towards W. (1).			
— 12 0	— 3 37	Aurora from S.E. to W.N.W., 10° wide and 40° S. of zenith (·5 to 1).			
PM.					
— 12 10	— 3 47	Irregular arch from N.N.W. through zenith to S.E. (·5 to 1·5), brightest in N.N.W.			

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. February. h. m. P.M.	1883. February. d. h. m. A.M.				
1st 12 15	1 3 52	Arch broken. Bright streak in N.N.W., alt. 15°, with a greenish glow (1), and drifting towards W. Another streak in E.S.E., 15° alt. (·5).			
— 12 20	— 3 57	Irregular arch from N.N.W. through zenith to 5° alt. in E. (1); in zenith, E. of zenith, and in N.N.W. brighter (1·5).			
— 12 30	— 4 7	Ditto - - - - -			
— 12 40	— 4 17	Aurora disappeared except a bright patch in N.N.W., 10° alt.			
— 12 55	— 4 32	Diffused arch (1) from N.N.W. through zenith to E.S.E., striated.			
— 1 5	— 4 42	Above arch disappeared. Faint streak in E.S.E., 5° alt., and a few faint vertical streamers in N.N.W., 5° alt.			
— 1 25	— 5 2	Above disappeared. Bright patch (1) in N.N.W., 10° alt. Faint band (·5) from W.N.W. to S.S.W., 20° alt.			
— 1 35	— 5 12	Ditto - - - - - -			
— 1 50	— 5 27	Above disappeared. Faint arch (·3) from W.S.W. to S.S.E., 30° alt.			
— 2 5	— 5 42	Arch diffused (·5) alt. 45°. Faint diffused lights in E. and E.S.E., 5° alt.			
— 2 15	— 5 52	Lights disappeared. Arch from W.N.W., 75° alt. (·3).			
— 2 25	— 6 2	Arch as above. Faint streak in N.N.W., alt. 20°. Vertical streamers (·8) in E.N.E., 3° alt.			
— 2 35	— 6 12	Arch through zenith and very faint. Streaks and streamers disappeared.			
— 2 50	— 6 27	Aurora disappeared except a faint streak in zenith (·5) -			
— 3 0	— 6 37	„ „ - - - - - -			
A.M.	P.M.				
2nd 2 28	— 6 5	Bright diffused arch (1) with streamers from 10° alt. in E.S.E. through zenith to 20° alt. in N.N.W.			
— 3 28	— 7 5	Bright diffused light from Procyon to about 10° N.W. of Cassiopeia, and about 10° wide (1·2).			
— 4 28	— 8 5	Faint streak through zenith and about 12° on either side			
— 5 28	— 9 5	Streak from zenith through Cassiopeia towards N.W. (1)			
— 6 28	— 10 5	Diffused lights round zenith, and streak as before (1) -			
— 7 28	— 11 5	Diffused irregular arch (·5) N.N.W. to S.E., 30° S. of zenith			
— 7 53	— 11 30	Parallel bands (·5) from N.W. to E.S.E., from 80° S. to 85° N. of zenith, and patches from N.N.W. to E.S.E. (·3) just above horizon.			
	A.M.				
— 8 28	2 12 5	Irregular aurora, from N.W. to 8° alt. in E.S.E., and from 80° to 85° S. of zenith (·1 to 1), brightest in E.S.E.			
— 9 28	— 1 5	Masses of aurora (·5) from W. to S., alt. 5°. Patch in N.N.W., 10° alt., and a few very faint streaks in zenith.			
— 10 28	— 2 5	Diffused masses of aurora (·5) from N to S.W., 20° alt. Irregular arch (1) from E.S.E. through zenith to about 25° alt. in N.W., with a greenish glow, and drifting rapidly from E. through zenith towards W. (Much magnetic disturbance.)			
— 11 28	— 3 5	Masses of aurora from E.S.E. to S. 60° alt., from (·5 to 1·5), brightest in S.S.E.			
— 12 28	— 4 5	Irregular masses of aurora (·5) from E.S.E. to S.S.W. on horizon, and partly visible through clouds at 10° alt.			
— 1 28	— 5 5	Irregular, and diffused arch from E.S.E. to N.N.E., 3° alt. (·2 to 1·5), brightest in E.S.E. Bright streak (1) in W.N.W., 20° alt. Faint arch (·5) S.E. to S.W., 10° alt.			
— 2 28	— 6 5	Faint diffused arch (·5) from E. through zenith to W.S.W., and irregular masses of aurora (·5) immediately above horizon from E.S.E. to S.S.W. Streaks in S., 40° alt. (1).			
A.M.	P.M.				
3rd 5 28	— 9 5	Arch (·5) from S.E. to N.N.W., 10° S. of zenith -			
— 7 28	— 11 5	Sky overcast, but light, probably caused by aurora. (Magnetic disturbance.) ·			
	A.M.				
— 9 28	3 1 5	Faint streaks (·7) in E.S.E., 80° alt.			

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. February. h. m.	1883. February. d. h. m.				
P.M.	A.M.				
3rd 12 28	3 4 5	Canopy (1·5) from about 20° alt. in N. and E. to about 15° alt. in W. and N.W.			
— 1 28	— 5 5	Diffused light through zenith extending about 20° S.E. and 30° N.W. of zenith; rays and patches in N.W. and N.E. Arch (1·5) from S.E. to W., about 45° alt in S.			
— 2 28	— 6 5	Arch (1) from S.E. to W. as before, and cloud-like masses of light along, and just below, the arch. Another arch from E. to N.W., 30° alt. (·5).			
A.M.	P.M.				
4th 3 28	— 7 5	Diffused arch (1) from E.S.E. to N.N.W., alt. 25° - -			
— 4 28	— 8 5	Broad diffused arch (1) from E.S.E. to W.N.W. through zenith, where 20° in width.			
— 5 28	— 9 5	Arch (·7) from E.S.E. to N., 15° alt. - - -			
— 6 28	— 10 5	Diffused arch (1) from E.S.E. to N.N.W., 5° E.N.E. of zenith.			
— 7 28	— 11 5	Diffused arch (·8) from S.E. to W.N.W. through Pleiades.			
	A.M.				
— 9 28	4 1 5	Diffused semicircular light (1) from zenith towards N.W.			
— 11 28	— 3 5	Irregular aurora (·5) from E.S.E. through zenith to W.S.W. Faint streaks just above horizon from E.S.E. through N.W. to S.			
P.M.					
— 12 28	— 4 5	Streak in E., 25° alt. Streaks of aurora as above (·5). Arch (·5) from E. to N.W., 5° alt. Faint streaks on horizon from N.W. to S.E. and in zenith.			
— 2 28	— 6 5	Streaks of aurora (·5) from N.W. to S., alt. 8° - -			
A.M.	P.M.				
5th 2 28	— 6 5	Aurora (1) from E.S.E. disappearing under a cloud in E., 5° alt.			
— 4 3	— 7 40	Bright diffused light in zenith, extending about 35° S.E. and N.W. of zenith (1·5).			
	A.M.				
— 8 28	5 12 5	Arch (·5) from S.E. to N.W., 60° S. of zenith. Another arch (·5) from E.S.E. to N.N.W., alt. 45°, and masses of aurora, like small cumulus clouds, in zenith, the whole drifting towards N.W. horizon.			
— 9 28	— 1 5	Arch (1) from E.S.E. to S.S.W., 45° alt. Streak of aurora (·5) on N. horizon.			
— 10 28	— 2 5	Irregular diffused arch (1·5) from S.E. to N.N.W. through zenith, about 20° wide. Faint arch from W.N.W. to S., alt. 10°.			
— 11 28	— 3 5	Arch (1) from N.N.W. to E.N.E., 5° alt. Masses of aurora, like cumulus clouds, from zenith to S.E. and N.W. drifting in all directions (·5). (Magnetic instruments much disturbed.)			
	P.M.				
6th 3 28	— 7 5	Masses of aurora (·5) on horizon from E.N.E. to N.N.W.			
— 4 28	— 8 5	Arch (1) from E.S.E. to N.N.W., 15° alt. Irregular mass (1) in N.N.W. to 20° alt.			
— 5 28	— 9 5	Two irregular arches (1) from E.S.E. to N.N.W.; 1st, 50° N. of zenith; 2nd, 70° S. of zenith.			
— 6 28	— 10 5	Diffused arch (1) from S.E. through zenith to N.N.W., 10° wide in zenith, and somewhat detached at the other two points.			
— 7 28	— 11 5	Diffused and irregular arch (1 to 2) from E.S.E. through zenith to W.N.W., brightest in W.N.W.			
	A.M.				
— 8 28	6 12 5	Arch from E.S.E. to W.N.W., 40° alt. in S., striated (2) and slightly prismatic in E.S.E.			
— 9 28	— 1 5	Faint arch (·4) from N.N.W. through zenith to 30° alt. in E.S.E. Band (1) parallel with horizon from E.S.E. to N.N.W., 1° to 2° alt.			
— 10 28	— 2 5	Faint irregular arch (·3) from E.S.E. to N.N.W., 10° alt.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. February. h. m.	1883. February. d. h. m.				
A.M.	A.M.				
6th 11 28	6 3 5	Faint arch (·7) from S.E. to W.N.W., 6° S. of zenith. Another arch (·5) from E.N.E. through Cassiopeia to W.N.W.			
P.M.					
— 12 28	— 4 5	Arch through Cassiopeia as before, the other arch passing below Regulus with a streak between the zenith and the arch.			
— 1 28	— 5 5	Aurora, like cumulus clouds, from S.E. to W., about 10° wide, alt. 45° in S.			
— 2 28	— 6 5	Faint diffused light (·2) S.E. of zenith - - -			
A.M.					
7th 9 28	7 1 5	Band (1) from S.E. to W. passing above Betelgeuse -			
— 10 28	— 2 5	Portions of arch (1) about 5° N. of zenith - -			
P.M.					
— 12 28	— 4 5	Mass of aurora (·5) on N.N.W. horizon - -			
— 2 28	— 6 5	Masses of aurora (·5) from E.S.E. to N.N.W., 6° alt. -			
A.M.	P.M.				
8th 3 28	— 7 5	Faint arch (·4) from S.E. through zenith to N.W., and faint patches in N. and N.E.			
— 4 28	— 8 5	Faint arch (·5) from E.S.E. to N.W., about 30° alt. -			
— 5 28	— 9 5	Faint arch (·7) from E.S.E. through Denebola to N.N.W.			
P.M	A.M.				
— 2 28	8 6 5	Faint arch (·3) from 60° alt. E.S.E. to W. through zenith.			
A.M.	P.M.				
9th 3 28	— 7 5	Irregular arch from E. to N.W. with vertical streamers drifting towards E., 30° alt. (1).			
	A.M.				
— 9 28	9 1 5	Masses of aurora (·5) visible between clouds, from N.N.W. to N.N.E., 15° alt.			
— 10 28	— 2 5	Bright, diffused, irregular arch from N.N.W. to E., 70° alt. (1 to 1·5).			
— 11 28	— 3 5	Arch (·8) from E.S.E. to N.W., 3° S. of zenith - -			
P.M.					
— 12 28	— 4 5	Ditto ditto - - - -			
— 1 28	— 5 5	Arch from N. to W. passing about 2° N.W., of zenith; in N. horizon (1·5), elsewhere very faint.			
A.M.	P.M.				
10th 2 28	— 6 5	Faint irregular arch from E. to N.N.W., 30° alt. - -			
— 3 28	— 7 5	Arch (1) with streamers from E.N.E. to E.S.E., 5° alt. -			
— 4 28	— 8 5	„ from E. to N.N.W., 5° alt., striated in N.N.W. Another faint arch (·4) from E.S.E. to W.N.W., 50° alt. in S.			
— 5 28	— 9 5	Diffused arch (1) from E.S.E. to W.N.W., 30° alt. Another arch (·5) from same points through zenith.			
— 6 28	— 10 5	Confused masses of aurora (1 to 2) in N.N.W., from horizon to 40° alt. Band (1) parallel with horizon from N.N.E. to E.S.E., 5° alt.			
— 7 28	— 11 5	Two faint arches, 35° and 50° alt., one from E. to N.W., (1), the other from S.E. through Orion to W.N.W. (1).			
	A.M.				
— 8 28	10 12 5	Arch (1·5) from E. to N.W., about 40° alt., diffused in E. Another arch (1) from S.E. through Orion to W.N.W.			
— 9 28	— 1 5	Arch (1) from S.E. through zenith to N.W., and one from S.E. through Betelgeuse to W. (1).			
— 10 28	— 2 5	Diffused masses of light (2) from S.E. through and on either side of zenith, to 45° N.W. of zenith.			
— 11 28	— 3 5	Arch (·5) from W. to S.E., 27° alt. Diffused masses in N.W., 10° alt., and in E.S.E., 45° alt.			
P.M.					
— 12 28	— 4 5	Faint arch (·3) from W. to S.E., 35° alt. Bright, diffused, irregular arch (1·5) from N.W. through zenith to 8° alt. in E.S.E.; this arch seemed to form and disappear in a few minutes.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. February. h. m.	1883. February. d. h. m.				
P.M.	A.M.				
10th 1 28	10 5 5	Two parallel arches (·5) from W. to S.E., alt. 20 and 30°. Mass of aurora in E.S.E. striated (1), and moving towards zenith. A few faint streaks in zenith.			
— 2 28	— 6 5	Faint arch (·3) from W.S.W. to S.E., 15° alt. Bright streaks (1) from E.S.E. to zenith; and an irregular arch (1) from W. to N.E., 25° alt.			
A.M.					
11th 9 28	11 1 5	Arch (1) from N.W. to E.N.E., 45° alt. Another arch (·5) from E.S.E. through zenith to about 50° alt. in W.			
— 10 28	— 2 5	Arch (1) from N.N.W. to E.S.E., 50° alt. Masses of aurora (·5) from W. to N.N.W., 25° alt.			
— 11 28	— 3 5	Faint irregular masses of aurora in W.S.W., 80° alt. (·7)			
P.M.					
— 12 28	— 4 5	Faint streak in E.S.E., 40° alt. (·3) - - -			
A.M.	P.M.				
12th 5 28	— 9 5	Faint arch from E.S.E. through tail star of Ursa Major to N.N.W.			
— 6 28	— 10 5	Arch (·8) from E.S.E. through zenith to N.N.W., 5° in width.			
— 7 28	— 11 5	Arch from E.S.E. to 20° of N.N.W., 80° alt. (·5 to 1), brightest in E.S.E.			
	A.M.				
— 8 28	12 12 5	Faint arch (·5) from 20° alt. E.S.E. through zenith to 20° alt. N.N.W.			
— 9 28	— 1 5	Arch (·5) from E.S.E. through zenith to W.N.W., slightly diffused in E.S.E.			
— 10 28	— 2 5	Faint arch (·5) from 60° alt. in E.S.E. through zenith to N.N.W.			
P.M.					
— 12 28	— 4 5	Faint band (·4) from E. through zenith. Diffused masses of light about 15° S. of zenith (1).			
— 1 28	— 5 5	Faint diffused arch (·5) from S.E. through zenith to N.W.			
A.M.	A.M.				
13th 9 28	13 1 5	Faint streak (·7) in E. from 10° to about 30° alt. -			
P.M.					
— 12 33	— 4 10	Faint arch from S.E. through zenith to N.N.W. - -			
— 1 28	— 5 5	Faint irregular arch from N.W. to E.S.E., 10° S. of zenith. Irregular aurora (1) from N.N.W. horizon to zenith, with streamers moving towards zenith.			
— 1 58	— 5 35	Arch (1) from N.W. through zenith to E.S.E. - -			
— 2 28	— 6 5	A few streaks (·5) from 10° alt. in N.W. to zenith -			
A.M.	P.M.				
14th 7 28	— 11 5	Faint arch (·3) from N.N.W. to E.S.E., 45° alt. - -			
— 8 18	— 11 55	Arch (1 to 1·5) from W. to S.E., 20° alt., striated, and with a greenish glow in S.E., brightest in S.E.			
	A.M.				
— 8 28	14 12 5	Arch much diffused and slightly prismatic in S.E., about 25° alt. (2).			
— 9 28	— 1 5	Arch (1) from W. to S.E., 35° alt. Irregular arch (1·5) from E.S.E. through zenith to about 30° alt. in N.W.			
— 10 28	— 2 5	Arch (·5) from W. to S.E., 15° alt., and several streaks about 5° alt. from W. to N.N.E. (·5 to 1), brightest in N.W.			
— 11 28	— 3 5	Faint curtain-shaped aurora (·5) in S.E., 70° alt. Faint streamers in zenith and N.N.W., 40° alt. (·5). Faint arch from S.E. to S.W., 10° alt. (·3).			
P.M.					
— 12 28	— 4 5	Diffused arch (1) from E. through zenith (?) to 20° alt. in W.			
— 1 28	— 5 5	Streak in zenith (1). Faint patch on E. horizon (·5). Faint arch from E.S.E. to W.S.W., 20° alt. (·3).			
— 2 28	— 6 5	Bright masses of aurora (1·5) in S.W., 15° alt. Faint streaks (·5) in W.N.W., 30° alt.			
A.M.	P.M.				
15th 3 25	— 7 2	Faint arch from N.N.W. through Ursa Major to E.S.E., and a few streaks in N.N.W., 8° alt. (·5).			

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. February. h. m.	1883. February. d. h. m.				
A.M.	P.M.				
15th 3 35	14 7 12	Arch as above. Another arch from same points joining the tail star of Ursa Major, and a streak from N.N.W. horizon to zenith (·5).			
— 3 45	— 7 22	Both arches as above. Streak disappeared - - -			
— 4 0	— 7 37	One faint diffused arch (·5) passing through Leo and Ursa Major to N.W.			
— 4 15	— 7 52	Arch as before. Streak from Cassiopeia adjoining the arch in N.W.			
— 4 25	— 8 2	Arch (·5) striated from N.N.W. just above Ursa Major to E.S.E., and several streamers from N.W. to N.N.E., from 5° to 25° alt. (·5).			
— 4 35	— 8 12	Arch (·5) from N.N.W. to E.S.E., 15° alt. Streamers as above (1).			
— 4 50	— 8 27	Segment of arch in E.S.E., 5° alt. (·7). Faint streak (·3) in N.N.E., 40° alt.			
— 5 0	— 8 37	Streak disappeared. Faint arch from E.S.E. to N., 45° alt.			
— 5 10	— 8 47	„ disappeared - - - - -			
— 5 45	— 9 22	Faint streak in N.N.W., 45° alt. - - -			
— 5 55	— 9 32	„ disappeared - - - -			
— 7 50	— 11 27	Masses of aurora (·5) from E.S.E. to S.E., 25° alt. -			
— 8 0	— 11 37	„ „ disappeared - - - -			
— 8 20	— 11 57	Bright masses of aurora (1) from 20° S.E. to zenith. Faint streaks in N.N.W. from horizon to 50° alt.			
	A.M.				
— 8 25	15 12 2	The whole zenith covered with aurora striated, quivering and with a greenish colour (1·5).			
— 8 30	— 12 7	Ditto faint (·5) - - - - -			
— 8 35	— 12 12	Ditto disappeared except a very faint patch in zenith. Faint streak in N.N.W. to 30° alt. (·3).			
— 8 40	— 12 17	Faint curtain-shaped aurora (·7) from E.S.E. to zenith -			
— 8 50	— 12 27	Diffused arch (1) from E.S.E. to W., 50° alt. - -			
— 9 0	— 12 37	„ very faint and from S.E. to Moon -			
— 9 10	— 12 47	„ disappeared - - - -			
— 9 20	— 12 57	A few bright streamers (1) in N.N.W. A parallel streak in S.W., 45° alt. (1). The whole disappearing immediately afterwards.			
— 9 50	— 1 27	Aurora (1) from 20° alt. S.E. to Moon through Leo -			
— 10 0	— 1 37	Bright diffused and irregular arch (·5 to 2) with prismatic streamers in E.S.E. from E.S.E. to W.N.W., brightest in E.S.E.			
— 10 6	— 1 43	„ disappeared except a very faint streak in E.S.E., 20° alt.			
— 10 10	— 1 47	„ disappeared - - -			
— 11 45	— 3 22	Diffused lights (1) in zenith and to 10° alt. in N.W. Bright streak (1) in W.N.W. parallel with horizon, 25° alt.			
— 11 50	— 3 27	Above disappeared. Bright diffused arch (1) with streamers, from E.S.E. through zenith to 20° alt. N.N.W., drifting towards N.			
— 11 55	— 3 32	„ disappeared, except the faint (·5) streaks on E.S.E. and N.W. horizons.			
P.M.					
— 12 5	— 3 42	Arch (·7) from 30° alt. in E.S.E. to W.N.W. through zenith, slightly diffused in W.N.W.			
— 12 10	— 3 47	Arch disappeared. Faint diffused lights from N.N.W. to N.N.E., 45° alt.			
— 12 15	— 3 52	„ disappeared. Faint arch (·5) from E.S.E. through zenith to N.N.W.			
— 12 45	— 4 22	„ disappeared - - - - -			
— 1 50	— 5 27	Patch in N.N.W., 10° to 25° alt. (1) - - -			
— 2 0	— 5 37	Several streamers (·5) from N.N.W. to N., 30° alt. -			
— 2 15	— 5 52	„ disappeared - - -			

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. February. h. m.	1883. February. d. h. m.				
A.M.	P.M.				
16th 3 33	15 7 10	Bright streamers (1) in N.N.W., from 10° to 20° alt., of a greenish colour.			
— 4 28	— 8 5	Bright (1 to 2) diffused and irregular arch with streamers, slightly prismatic in E.S.E., where brightest, from E.S.E. through zenith to N.N.W.			
— 5 28	— 9 5	Faint arch (·3) from E.S.E. to N.N.W., 30° alt. -			
— 7 28	— 11 5	Diffused masses of light (1) in and S. of zenith - -			
	A.M.				
— 8 28	16 12 5	Band of light through zenith to about 20° S.E. and N.W. of zenith (1).			
— 10 28	— 2 5	Faint patch in N.W. - - - - -			
— 11 28	— 3 5	Arch (1) from N.N.W. through zenith to E.S.E. horizon			
P.M.					
— 12 28	— 4 5	Arch (1) from S.S.E. to W.S.W., 20° alt. Irregular aurora (1), striated, and in rapid motion, from E.S.E. through zenith and moving towards N.W.			
— 1 28	— 5 5	Arch (·5) from N.W. to S.E., 30° S. of zenith, and a streak (·5) from E.S.E. to zenith.			
A.M.	P.M.				
17th 7 28	— 11 5	Arch (1) from S.E. just above the moon to N.W. horizon			
	A.M.				
— 8 28	17 12 5	Irregular arch (1) from N.N.W., just above horizon to E.S.E., a mass of aurora of a greenish colour at the N.N.W. end of arch, and from it another arch (1·5), slightly prismatic, through zenith towards S.E. (Decrease of horizontal force.)			
— 9 28	— 1 5	Mass of aurora (1) from N. to N.E., from 2° to 10° alt. -			
— 10 28	— 2 5	Irregular aurora from N.N.W. through zenith to about 40° alt. in E.S.E., and about 20° wide in zenith.			
P.M.					
— 1 28	— 5 5	Very faint (·2) diffused arch from E. horizon through zenith to 15° alt. S.W.			
— 1 57	— 5 34	Bright prismatic aurora (2) from N.N.W. horizon to			
	— 5 35	70° alt., thence descending to N.N.E. horizon. Faint	278	367	1297
	— 5 37	masses of aurora, like cumulus clouds, from S. to S.W.	283	356	1199
	— 5 39	(·5), 20° alt. (Magnetic disturbance.)	262	367	1218
— 2 4	— 5 41	„ „ disappeared except a faint patch (·3) in N.N.W., 10° alt.			
A.M.	P.M.				
18th 7 28	— 11 5	Faint streak (·3) in E.S.E., 25° alt. - - -			
19th 5 28	18 9 5	Bright irregular aurora (2 to 3) with streamers, from E.S.E. to zenith, quivering, and in rapid motion, prismatic, and drifting to N.N.W. (Magnetic disturbance.)			
— 5 36	— 9 13	„ „ fainter (1), and the whole sky from E.S.E. to zenith and N.N.W. more or less covered with aurora.			
	A.M.				
— 8 28	19 12 5	Band (1) from Spica through Leo to N.W. - -			
P.M.					
— 1 28	— 5 5	Arch (·5) from E.S.E. to S.W., 30° S. of zenith - -			
A.M.	P.M.				
20th 7 29	— 11 6	Two parallel arches (·5) about 2° apart, from N.N.W. through zenith to E.S.E.			
	12 0	- - - - - - - -	422	314	718
	A.M.				
— 8 28	20 12 5	Irregular arch, striated, (1) from S.E. to S.S.W., 15° alt., pulsating towards zenith.			
— 8 39	— 12 16	The whole sky from E.S.E. to S.W. and at zenith covered with very bright, prismatic, curtain-shaped aurora, in rapid motion and pulsating in all directions, (1 to 3), brightest from E.S.E. to S. (1), in zenith.			
— 8 40	— 12 17	Corona in zenith. (Much magnetic disturbance) -			
	12 18	- - - - - - - -	86	345	1000
	12 20	- - - - - - - -	54	324	200
	12 22	- - - - - - - -	66	389	Off scale.

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. February. h. m.	1883. February. d. h. m.				
A.M.	A.M.				
20th 9 13	20 12 50	The whole sky from S.W. through W. to E.N.E. to zenith, covered with very bright prismatic aurora, striated and in rapid motion (1 to 3), brightest from N.N.W. to zenith.			
— 9 28	— 1 5	Arch (1) from S.W. to N.E., 8° alt. - - -			
— 10 28	— 2 5	Arch (1) from N.W. to E.N.E., 6° alt. - - -			
— 11 28	— 3 5	Faint streak (·3) in E.S.E., 45° alt. - - -			
P.M.					
— 12 28	— 4 5	A few bright prismatic streamers in zenith (2) visible between clouds. Bright streak in E.S.E., 50° alt. (1). (Declinometer slightly disturbed.)			
— 2 28	— 6 5	Faint streak in zenith (·5) - - - -			
A.M.					
21st 8 28	21 12 5	Arch from E.S.E. to N.N.W., 25° alt., of a greenish colour and (1) in E.S.E., and the rest (·5).			
— 9 28	— 1 5	Irregular arch (1) from N.N.E. to E., 10° alt. - -			
— 10 28	— 2 5	Bright patch (1) in N.N.W., 5° alt. - - -			
	P.M.				
22nd 6 28	— 10 5	Arch (1) of a greenish colour from E.S.E. to N., 5° alt. -			
— 7 28	— 11 5	Arch (·5) from S.E. to N.W., about 30° alt. - -			
	A.M.				
— 8 28	22 12 5	Arch (2) from S.E. to E.N.E., 5° alt., and just above this arch are masses of light, curtain-shaped, and almost green in colour; from this a faint band through Procyon and Aldebaran to W.N.W.			
— 8 53	— 12 30	Band disappeared. Above aurora has extended to Aldebaran, about 30° wide, and appears like cumulus clouds (1). (Vertical force disturbed.)			
— 9 28	— 1 5	Faint arch from E.S.E. to 45° alt. in N.W., 55° alt. -			
— 10 33	— 2 10	Band (1) from S.E. through zenith to N.W. - -			
— 10 49	— 2 26	„ brighter (3) - - - - -			
P.M.					
— 12 28	— 4 5	Bank of aurora from N.W. to N.N.E., 3° to 8° alt. (·5) -			
— 1 28	— 5 5	Irregular arch (1) from E.S.E. through zenith to N.N.W. Patch (·5) on horizon in N.N.E.			
A.M.					
23rd 8 28	23 12 5	Bank of aurora (1) from N.N.W., to N.N.E., 5° alt. Sky cloudy. (Magnetic disturbance.)			
— 9 2	— 12 39	Irregular striated arch (1) from S.E. to N.N.W., 60° alt. Patches (1) with a greenish glow on N. horizon, 5° to 10° alt., and several parallel streaks in zenith (·5).			
— 10 28	— 2 5	Faint arch (·5) from N.N.W. to E.S.E., alt. 5°, partly visible through clouds.			
	P.M.				
24th 3 28	— 7 5	Irregular arch (1) from N.N.W. to E.S.E., 15° alt. -			
— 4 28	— 8 5	Masses of aurora on N.N.W. horizon. Two arches (1) from N.N.W. to E.S.E.; 1st, 20° alt., 2nd, 60° alt., both arches moving S. till, the higher one reached the zenith, where it seemed to disappear; the lower one diffused and fainter.			
— 5 28	— 9 5	Irregular aurora (1) from N.N.W. to E.S.E., from 40° to 50° alt., appearing to move towards zenith for a few seconds, and then drifting back towards the horizon.			
— 5 38	— 9 15	Irregular striated arch (1·5) with a greenish glow, from N.N.W. through zenith to 15° alt. in E.S.E., pulsating from N.N.W. to zenith.			
— 6 23	— 10 0	- - - - - - - -	413	314	515
— 6 28	— 10 5	Irregular arch (·5) from N.N.W. through zenith to E.S.E. Irregular, striated, aurora (1 to 1·5) from S.E. to 45° alt. in S.W., alt. 25°, in rapid motion, and moving from S.E., where brightest.			
— 6 41	— 10 18	- - - - - - - -	280	337	100
— 6 42	— 10 19	Curtain-shaped, confused aurora covering the whole sky from zenith to 30° alt. on all sides (1·5). (Magnetic disturbance.)			
— 6 43	— 10 20	- - - - - - -	290	308	400

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. February. h. m.	1883. February. d. h m.				
A.M.	P.M.				
	23 10 22	- - - - - - - - - -	320	255	250
24th 7 18	— 10 55	Bright, irregular, diffused arch (2) of a greenish colour from E.S.E. to W., 10° alt.			
— 7 28	— 11 5	Arch (1 to 1·5) from N.N.W. to E.S.E., where brightest, 5° alt.			
— 7 57	— 11 34	Faint patch (·5) on N.N.W. horizon - - -			
	A.M.				
— 8 28	24 12 5	Bright patch (1) on N.E. horizon - - -			
— 10 28	— 2 5	Diffused arch (·7) from E.S.E. to N.N.W., 80° alt. -			
— 11 13	— 2 50	Band suddenly appeared from 40° alt. in S.E. through zenith to 40° alt. in N.W., prismatic on N. edge of band, and pulsating from N.W. to S.E.; towards N.W. in S. (3) it exploded into Corona, in which crimson-coloured streamers danced with great rapidity. The whole disappeared in 2 minutes.			
P.M.					
— 2 28	— 6 5	Band from S.E. to N.W. through zenith (1), slightly prismatic. (Bifilar and declinometer disturbed.)			
A.M.	P.M.				
25th 3 28	— 7 5	Faint arch (·5) from S. to N.N.W., 60° alt. Faint masses from E to E.N.E., 70° alt. (Magnetic disturbance.)			
— 4 0	— 7 37	Bright masses of aurora (1·5) from N.N.W. to W.N.W., 50° alt.			
— 4 28	— 8 5	Arch (1) from N. through zenith to S., where diffused, Masses of aurora (1) in E., E.S.E., and N.E., 30° to 40° alt.			
— 5 28	— 9 5	Serpentine arch (1) from E.S.E. through zenith to N.N.W.			
27th 3 28	26 7 5	Irregular aurora (1) from E.S.E. to N.N.W., 30° alt., partly visible through clouds.			
— 4 28	— 8 5	Ditto. Sky nearly overcast - - -			
— 5 28	— 9 5	Patches of aurora (·5) visible through clouds from E.S.E. to N.N.W., 25° alt.			
— 6 28	— 10 5	Faint irregular aurora from E.S.E. to N.N.W., 80° alt., (·5). Patches of aurora just above horizon from E.S.E. to N.N.W., (·3).			
— 7 8	— 10 45	Bright broad diffused arch (1) from E.S.E. through zenith to N.N.W., partly visible between clouds in N.N.W.			
— 7 28	— 11 5	Faint irregular arch (·5) from E.S.E. horizon to W.N.W., 60° alt.			
	A.M.				
— 8 28	27 12 5	Arch (·7) E.S.E. to W.N.W., 80° alt. - -			
	P.M.				
28th 6 28	— 10 5	Diffused arch (·7) from 50° alt. E.S.E. through zenith to 70° alt. W.N.W., partly visible through clouds. Sky nearly overcast.			
— 7 28	— 11 5	Diffused mass of light in zenith, and extending 10° S.E. of zenith.			
March					
1st 3 10	28 6 47	Band from E. through Ursa Major to N.W. (1) - -			
— 3 20	— 6 57	Band as above and one on either side of Ursa Major -			
— 3 25	— 7 2	Bright arch (2) with vertical streamers from W.N.W. through zenith to E.S.E., slightly prismatic, in rapid motion and drifting towards N.E. Bright (1·5) diffused masses on horizon from E. to E.S.E.			
— 3 30	— 7 7	Arch now less bright (1) in zenith, diffused in W.N.W., and striated in E.S.E. Aurora on E. horizon now (·5),			
— 3 36	— 7 13	Arch irregular (2), of uniform brightness and 15° wide in zenith. Another lower arch (1) from E.S.E. to E.N.E.5°, alt.			
— 3 40	— 7 17	Upper arch dividing in zenith and drifting S. & W. Lower arch as above.			
— 3 50	— 7 27	Above lower arch blended with upper one, alt. 50°, and extending to zenith; streamers of a greenish hue at the extremities of both arches. Lower arch serpentine in shape in E.S.E.			

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. March. h. m. A.M.	1883. February. d. h. m. P.M.				
1st 3 55	28 7 32	Arches divided. Upper one faint (·5). Lower one 30° alt. and upper edge (·5) lower (2). Another arch (1) from E. to E.N.E., 3° alt.			
— 4 0	— 7 37	Upper arch disappeared except a faint patch in W.N.W., 20° alt. Centre arch (1·5) and slightly prismatic, 40° alt. Lower arch (·3) very faint.			
— 4 5	— 7 42	Centre arch less bright, except in W.N.W., where striated (2). Lower arch as before.			
— 4 10	— 7 47	Centre arch only remains, and is diffused (1), alt. 60° -			
— 4 15	— 7 52	Above arch (1) through zenith and regular except in E.S.E.			
— 4 20	— 7 57	Above arch alt. 70° and (·7) except in W.N.W. (1). Faint patch in N.W., alt. 10° (·5). Faint streak (·5) in zenith.			
— 4 35	— 8 12	Above arch (1·5) from S.E. through Leo and zenith to N.W.			
— 4 50	— 8 27	Ditto - - - - - -			
— 5 0	— 8 37	Arch through Ursa Major, Leo, and Procyon; streamers on N. edge.			
— 5 10	— 8 47	Arch through Orion and Pleiades (1) - - -			
— 5 20	— 8 57	Arch striated and diffused - - - -			
— 5 30	— 9 7	Two more arches (2) from S.E. extending to Leo - -			
— 5 45	— 9 22	Arch as before (1) through Orion and Pleiades, and a diffused mass of light in S.E. adjoining the arch, extending to 30° alt.			
— 5 55	— 9 32	Another arch (·5) from S.E. through zenith to about 20° alt. in N.W., and diffused masses of light either side of arches in S.E.			
— 6 10	— 9 47	„ disappeared except the arch through Orion, which is slightly prismatic and making volute motions in N.W. Streamers on the arch 45° alt. (1·5).			
— 6 20	— 9 57	„ disappeared. Band from S.E. through zenith, prismatic, and pulsating with great rapidity.			
— 6 25	— 10 2	Three bands, one through, and one on either side of zenith, with winding streaks between the bands as well as streamers; the whole prismatic (2), moving and pulsating in all directions.			
— 6 35	— 10 12	Irregular arch (1) from E. to N.W., alt. 30°, and prismatic. Also patches and streamers from S.E. to W., 45°. alt in S.			
— 6 45	— 10 22	Above arch (·5). Another arch (2) from N.N.E. to W.N.W., prismatic, and pulsating. Pyramids of light on N. horizon.			
— 6 55	— 10 32	Latter arch through zenith and just passing the Pleiades to W.			
— 7 0	— 10 37	„ disappeared except band (1) from N.N.E. curving along the horizon to S.E., through Leo and Pleiades to W.N.W. (1).			
— 7 15	— 10 52	Above band, diffused through Leo, Procyon, and Pleiades to W.N.W. (1·5).			
— 7 30	— 11 7	Diffused masses of light (1·5) from N.E. and S.E., passing S. of zenith to W.N.W., about 20° wide.			
— 7 50	— 11 27	Ditto. Band (1) from N.E. to N.W., 40° alt. -			
— 7 55	— 11 32	Ditto. Band disappeared - - -			
— 8 20	— 11 57	Above band prismatic (2) and moving with great rapidity in circular motions.			
	March. A.M.				
— 8 30	1 12 7	Irregular arch from E.S.E. through zenith to N.W., striated (2) and slightly prismatic, about 10° wide, and pulsating from E. to N. on N. side of arch and from N. towards S. on S. side.			
— 8 55	— 12 32	Irregular arch from E.S.E. to W. appearing like confused masses in E.S.E. and forked in W., from 50° alt. in S. to zenith (1·5). A few faint (·7) streamers from E.S.E. to E.N.E., 10° alt.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. March. h. m.	1883. March. d. h. m.				
A.M.	A.M.				
1st 9 5	1 12 42	Streamers disappeared. Arch (·5). A lower arch from E. to N.N.W., 20° alt., with bright, prismatic, vertical streamers (2) in rapid motion and pulsating.			
— 9 15	— 12 52	Arches faint (·5) and in confused masses, the sky from E.S.E. to W.N.W. and zenith more or less covered with aurora from 10° alt. in N.E.			
— 9 25	— 1 2	Arches drifting towards S. and like small cumulus clouds in N.E.			
— 9 35	— 1 12	Above disappeared. Arch from S.E. to S.W., alt. 30° (·5). A few faint streamers (·5) from N.N.W. to N.E. from 15° alt. to 30° alt.			
— 9 45	— 1 22	Above arch very faint, 10° alt. Streamers as before. Faint masses in zenith.			
— 10 0	— 1 37	Above arch disappeared. Arch (·5) from E.S.E. to W.S.W., 10° alt. in S. Band (·7) with streamers from same points, 5° alt. in N.			
— 10 15	— 1 52	Aurora (·7) from E.S.E. to zenith and extending in a circle to the same point, E.S.E., and thence in a bright horizontal line to N.E. (1). Patch (·5) in S., 10° alt.			
— 10 30	— 2 7	Faint masses of aurora (·5) on horizon and to 5° alt. all round except in W.S.W.			
— 10 40	— 2 17	Faint aurora (·5) from S.W. to S.E., alt. 8°. Bank of aurora (1) in rapid motion from N.W. to E.S.E., from 3° to 9° alt.			
— 10 50	— 2 27	Bank disappeared, a few patches on N. horizon (·5). Aurora from S.W. to S.E. as before.			
— 11 10	— 2 47	Very faint patch on N. horizon. Aurora as above -			
— 11 20	— 2 57	Irregular aurora (1) from N. to N.N.W., 8° alt. Aurora from S.E. to S.W. as before, but fainter (·2) and 5° alt.			
— 11 35	— 3 12	Ditto. - - - - -			
— 11 55	— 3 32	Faint arch (·3) from N.N.E. through zenith to 10° S.W. of zenith.			
P.M.					
— 12 5	— 3 42	Irregular aurora (1) from S.W. to zenith, and a few patches (·5) on N. of zenith.			
— 12 15	— 3 52	Irregular diffused aurora (1) from W.S.W. to S.E., 30° alt.			
— 12 20	— 3 57	Irregular aurora (1) from W. through zenith to E.S.E., striated, and pulsating in all directions, about 10° either side of zenith.			
— 12 35	— 4 12	Irregular arch (1·5) from 10° alt. E.S.E. through zenith to W., drifting S. Patch (1) on N.N.W. horizon.			
— 12 50	— 4 27	„ disappeared. Faint masses in N.N.W. and N.W., 50° alt. (·3).			
— 1 5	— 4 42	„ disappeared. Bright irregular aurora (1·5) from E.S.E. to E.N.E., 60° alt.			
— 1 15	— 4 52	„ disappeared - - - -			
— 1 25	— 5 2	Faint patch in N.N.W., 15° alt. (·3) - -			
— 1 30	— 5 7	Faint irregular arch (·5) from E. to S.W., 80° alt. in S.E.			
— 1 40	— 5 17	„ disappeared, except a faint patch (·6) in S., 25° alt.			
— 1 50	— 5 27	„ disappeared - - -			
— 2 10	— 5 47	Faint streamers (·5) in N.N.E., 30° alt. - -			
— 2 15	— 5 52	„ disappeared - - -			
A.M.	P.M.				
2nd 3 28	1 7 5	Irregular arch (1) from E.S.E. to N.N.W., 50° alt. -			
— 4 28	— 8 5	Faint arch (·3) from E.S.E. to N.N.W., 40° alt. Faint arch (·5) from E.S.E. to zenith. Arch (1) from S.E. to W.N.W., 45° S. of zenith.			
— 5 28	— 9 5	Irregular arch (·5) from S.E. to N.W., 25° alt. Faint streaks in zenith and on N. horizon (·3).			
	— 9 58	- - - - - - - - -	394	326	766
— 6 23	— 10 0	Arch (1·5) from S.E. to N.W., 20° alt., with prismatic streamers pulsating from S.E. to N.W.	370	315	950
	— 10 2	- - - - - - - - -	362	306	1069
— 6 26	— 10 3	Serpentine arch (1) from N.W. to about 20° alt. in S.E. through zenith.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. March. h. m.	1883. March. d. h. m.				
A.M.	P.M.				
2nd 6 28	1 10 5	Serpentine arch regular and in rapid motion, moving from N.W. to S.E. in waves, or like small clouds, and drifting in a few seconds from zenith to 30° alt. in S.W. (Magnetic instruments much disturbed.)			
— 7 28	— 11 5	Bright irregular arch (2) with streamers slightly prismatic, quivering and in rapid motion from E.S.E. to W.N.W., 45° alt. S., drifting towards zenith.			
	A.M.				
— 8 28	2 12 5	Bright streamers (1·5) from S.E. to S.W. moving rapidly backwards and forwards, 40° alt. Faint masses of aurora in E.S.E., 15° alt., and in N.N.W. 20° alt. (Magnetic disturbance).			
— 9 28	— 1 5	Irregular aurora (·5 to 1) from E.S.E. to S.S.W., where brightest, 20° alt. Bright patch (1) in N.E., 3° alt.			
— 10 28	— 2 5	Bright irregular aurora from E. to 10° N.W. of zenith (1).			
— 11 28	— 3 5	Irregular striated arch (·5) from S.E. through zenith to N.W. Another arch (1) from S.E. to W.S.W., 25° alt. in S.			
P.M.					
— 12 28	— 4 5	Masses of light (2) from zenith to N.W. drifting towards N., patches and streamers all round zenith to 45° alt.			
— 1 28	— 5 5	Band (·5) from E.S.E. to Leo, and one from zenith to W.			
A.M.	P.M.	Arch (1) from S.E. to W., 25° alt.			
3rd 3 28	— 7 5	Diffused arch (·7) from E.S.E. through zenith to N.N.W.			
— 4 28	— 8 5	Faint arch (·5) from 10° alt. S.E. to W.N.W., 50° alt. -			
— 5 28	— 9 5	Arch (·7) from E.S.E. to W.N.W., 70° alt. S. - -			
— 6 23	— 10 0	- - - - - - - - -	206 295 314	340 270 290	−100 +600 625
— 6 28	— 10 5	Arch (1) from N.N.W. to E.S.E., 60° alt. (Magnetic disturbance.)			
— 7 28	— 11 5	Masses of light (1) in N.W., 50° alt. - - -			
— 8 28	3 12 5	,, (1) in N.W. and N.E., 50° alt. - -			
— 9 28	— 1 5	,, from E. to N.W., extending from 30° alt. to zenith, prismatic and with a tremulous motion in N.W. (1·5).			
— 10 28	— 2 5	Arch (1) from E. to N.W., alt. 30°, and just above it patches like small cumulus clouds.			
— 11 28	— 3 5	Irregular aurora (·5) from N.N.W. to E.N.E., 8° alt. -			
P.M.					
— 12 28	— 4 5	Faint streak (·3) from E.N.E. horizon to zenith, and a few patches on N. horizon to 5° alt., very faint.			
— 1 28	— 5 5	Streak (·5) from E.S.E. horizon to 10° from zenith. Another streak on S.E. horizon (·5), and a patch on N. horizon (·3).			
A.M.	P.M.				
4th 3 28	— 7 5	Faint arch (·3) from E. to N.N.W., about 25° alt. -			
— 4 28	3 8 5	Arch from E.S.E. to N.W., and three streaks parallel with each other and the arch above it in N.W. (1·5).			
— 5 28	— 9 5	Arch (2) from E.S.E. through Denebola and Ursa Major to N.W. Another faint arch from S.E. through Rigel to W.			
— 6 28	— 10 5	The sky from 10° alt. in N. to Orion is nearly covered with irregular masses of light of uniform brightness (1). (Magnetic disturbance.)			
— 7 6	— 10 43	Bright aurora (1·5) covering the sky from about 10° alt. in N. to 30° alt. in S.W., pulsating from E.S.E. to N.N.W., where brightest, 35° alt.			
— 7 28	— 11 5	Arch (·3) from S.E. to N.W., 25° alt., about 10° of aurora on either side of zenith (·5), and irregular aurora from N.N.W. to E.S.E., from 5° to 10° alt. (·5).			
	A.M.				
— 8 28	4 12 5	Faint arch (·3) from S.E. to N.W., 20° alt. Irregular diffused band (1) from E.S.E. through zenith to N.N.W.			
— 9 28	— 1 5	Arch (1) S.E. to N.W., 35° alt. Irregular diffused aurora from E·N.E. through zenith to N.N.W. (1·5), with streamers in N.N.W. (2) pulsating rapidly from N.N.W. to E.N.E.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. March. h. m.	1883. March. d. h. m.				
A.M.	A.M.				
4th 10 28	4 2 5	Very faint arch from S.E. to N.W., 20° alt., and several streamers (·5) from E.S.E. to W. S. of zenith 30° alt.			
— 11 28	— 3 5	Faint arch (·5) from E.S.E. to W., 15° alt. - - -			
P.M.					
— 12 28	— 4 5	As above, and faint streak (·5) in N.N.W., 10° alt. -			
— 1 28	— 5 5	Faint arch (·3) from 50° alt. S.E. to W. horizon, 60° alt.			
A.M.	P.M.				
— 3 28	— 7 5	Masses of aurora from E. to S.E. from horizon to 5° alt. Arch from S.E. to N.N.W., 45° alt. (1).			
5th 4 28	— 8 5	Diffused arch (1) from S.E. to N.N.W., from 70° to 90° alt., moving from N. to S. Several patches somewhat like small cumulus clouds on N. horizon (·5).			
— 5 28	— 9 5	Arch (1·5) from E.S.E. to N.N.W. with streamers, 15° alt. Aurora from S.E. through zenith to N.W. (·5). Two arches (·5) S. of zenith, parallel from N.W. to S.E., 30° and 40° alt.			
— 6 28	— 10 5	Two parallel arches (1) from S.E. to N.W., 25° and 45° alt. Irregular arch from E.S.E. to N.N.W., 20° alt. (1), and several streaks (·5) in zenith.			
— 7 3	— 10 40	Bright diffused irregular arch (2) prismatic, and with streamers, from E.S.E. to W.N.W., 70° alt. in S. Irregular aurora from S.S.E. to W.S.W., 10° alt. (1).			
	— 10 58	- - - - - - - - -	364	318	593
— 7 23	— 11 0	Much curtain-shaped, rapidly-moving aurora, (2) and prismatic round and about zenith and to N.W. thereof.	318	319	920
— 7 24	— 11 1	Ditto suddenly brightening with development of vertical striæ.			
	— 11 2	- - - - - - - - -	252	310	700
— 7 28	— 11 5	Ditto much fainter. Arch (1·5) from E.S.E. to N.N.E., with prismatic streamers 10° alt.	235	270	
— 7 30	— 11 7	- - - - - - - - -	415		
	A.M.				
— 8 28	5 12 5	Very irregular and diffused aurora (1) from E.S.E. through zenith to N.N.W. Arch (1) from E.S.E. with streamers to N.			
— 9 28	— 1 5	Band (1·5) from E.S.E. to N., 5° alt. Arch (·5) from S.E. to W.S.W., 10° alt. Faint streak in E.S.E., 40° alt. Faint masses of aurora on N.N.W. horizon.			
— 10 28	— 2 5	Bright green patches (2) in W., 10° alt., and N.N.W., 5° alt. Faint diffused light in E.S.E. to 30° alt. (·5).			
— 11 28	— 3 5	Masses of curtain-shaped aurora from S.E. to W.N.W. through Leo (1).			
P.M.					
— 12 28	— 4 5	The sky from 30° alt. in N. to 25° alt. S. is covered with faint masses of aurora in the shape of clouds and curtains, brightest in N.W. (1).			
— 1 28	— 5 5	Faint diffused arch from S.E. to W., about 60° alt. in S., and another arch from N.E. to W., 40° alt. (·4).			
A.M.	P.M.				
6th 4 28	— 8 5	Very faint arch from E.S.E. to N., 10° alt. - -			
— 5 28	— 9 5	Diffused arch (·5 to 1) from E.S.E. to N., 60° alt., brightest at extremities.			
— 6 28	— 10 5	Two arches (1) from E.S.E. to N., 10° and 30° alt. -			
— 7 28	— 11 5	Diffused arch from E.S.E. to N.W. through zenith, about 15° wide (1).			
	AM.				
— 8 28	6 12 5	Ditto - - - - - -			
— 9 28	— 1 5	Irregular arch (2) from 10° alt. in S.E. through zenith to N.W., diffused and brightest in zenith.			
— 10 23	— 2 0	Arch (1·5) from S.E. through zenith to N.W. - -			
— 11 28	— 3 5	„ (·5) from S.E. to N.W., 30° alt. Diffused aurora (·5) from E.S.E. through zenith to N.N.W.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. March. h. m.	1884. March. d. h. m.				
P.M.	A.M.				
6th 12 28	6 4 5	Irregular diffused aurora from S.E. through zenith to N.W., about 25° wide in zenith (1).			
— 1 28	— 5 5	Arch (·5) from S.E. to N.W., 30° alt. - - -			
A.M.	P.M.				
7th 5 28	— 9 5	Faint diffused auroral light through zenith about 15° towards N.W. and S.E.			
— 6 28	— 10 5	Auroral light visible between clouds in all directions. (Instruments very unsteady.)			
— 7 28	— 11 5	Mass of aurora from E. to S.E. on horizon (·5), partly visible between clouds. Arch (·8) from S.E. to N.W., 40° alt.			
	A.M.				
— 8 28	7 12 5	Aurora, like small cumulus clouds, from S.E. to N.W., 5° to 10° alt. (·5). Irregular aurora (1) from E.S.E. to zenith. Curtain-shaped aurora from E.S.E. through W. to S.W., and from zenith to alt. 70°.			
— 9 28	— 1 5	Irregular aurora (·5) from S.E. to N.W., 30° alt., and several streamers (1) in S.W., 50° alt.			
— 9 42	— 1 19	Arch (1·5) from S.E. to N.W., 35° alt., with bright streamers (2) reaching to zenith, in rapid motion. (Magnetic disturbance.)			
— 9 46	— 1 23	Above disappeared except a few patches of the arch -			
— 10 28	— 2 5	Arch (1) from E.S.E. to N.N.W., 20° alt. Mass of aurora from E.S.E. to S.E. from horizon to 6° alt. Patches of auroral light from S.E. to N.W., 25° alt (·5).			
— 11 28	— 3 5	Bright band (1·5) with streamers of a greenish colour from W.N.W. to E., 10° alt. Faint irregular arch (·5) from E.S.E. to S.S.W., 7° alt.			
P.M.					
— 12 28	— 4 5	Bright patches (1) on N.E. horizon. Faint arch (·3) from E.S.E. to W.S.W., 15° alt.			
— 1 28	— 5 5	Patch (·7) on N.W. horizon - - -			
A.M.	P.M.				
8th 4 28	— 8 5	Irregular diffused striated aurora from S.E. through zenith and about 15° on either side to N.N.W. (1).			
— 5 18	— 8 55	Prismatic arch (1·5) from E.S.E. to N.W., 45° alt. -			
— 5 20	— 8 57	Streamers in rapid motion in zenith (2), sky nearly covered with fainter aurora.			
			270	276	400
— 5 23	— 9 0	Aurora (1·5) in rapid motion and slightly prismatic, from N.N.W. to E.S.E., from 60° to 80° alt.	330	235	350
			305	255	300
— 5 28	— 9 5	„ fainter (1), lower edge only slightly prismatic. A few streamers in S.W., 50° alt. (·5). (Magnetic disturbance).			
— 5 59	— 9 36	Arch (1) from E. to N.N.W., 6° alt. The whole sky more or less covered with very faint aurora, like cumulus clouds.			
— 6 0	— 9 37	- - - - - - - - -	383	276	405
— 6 28	— 10 5	Faint arch (·3) from S.E. to N.W., 15° alt. Irregular diffused aurora from E.S.E. to N.N.W., 15° to 80° alt. (·5 to 1), brightest in N.N.W. Faint aurora in zenith like small cumulus clouds (·5).			
— 7 3	— 10 40	Bright arch (2) from E.S.E. to N.N.W., alt. 40°. Much curtain-shaped aurora (1) from E.S.E. through zenith to W.N.W. and W.S.W.			
— 7 28	— 11 5	Arch from E.S.E. to W.N.W., 50° alt. in S. (1). Another faint arch (·3) from S.E. to W., 5° alt.			
	A.M.				
— 8 28	8 12 5	Bright arch (2) from S.S.E. to W., with bright prismatic streamers, and pulsating, 5° alt. Bright patches on E.S.E. horizon, partly visible between clouds (1).			
— 9 28	— 1 5	The whole zenith covered with aurora (·7) extending to 40° alt. in E.S.E. and 20° alt. W.N.W. Bright patches in N.N.E. Visible between clouds (1), alt. 20°.			
— 10 28	— 2 5	Faint patches (·5) visible between clouds in N.N.W., 50° alt.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. March. h. m.	1883. March. d. h. m.				
A.M.	P.M.				
9th 3 8	8 6 45	Aurora (·5) from 20° alt. E.S.E. through zenith to 30° alt. W.N.W., striated and of a faint copper colour.			
— 3 28	— 7 5	Irregular arch (1) from E.S.E. to 20° alt. in N.N.W., with streamers slightly prismatic and striated, 80° alt. in S.			
— 4 23	— 8 0	- - - - - - - -	413	299	125
— 4 28	— 8 5	Four arches (1) from E.S.E. to W.N.W., two through zenith, one alt. 65°, and the other alt. 45°, striated, and arch 65° alt. with streamers. Another faint arch (·7) from E.S.E. to N.N.E., 30° alt.			
— 4 54	— 8 31	Curtain-shaped folds of aurora in zenith, prismatic and in rapid motion (2·5).			
— 4 56	— 8 33	- - - - - - - -	80	520	
— 4 57	— 8 34	Aurora fading (1) - - - - -			
— 4 59	— 8 36	- - - - - - - -	290	330	
— 5 0	— 8 37	Aurora (2) in N.N.W., 35° alt. - - - -			
— 5 2	— 8 39	- - - - - - - -	298		
— 5 18	— 8 55	Bright irregular aurora (1·5) from N.N.W. to E., alt. 10°.	316	268	329
— 5 23	— 9 0	- - - - - - - - -	312	260	−50
— 5 28	— 9 5	Bright diffused striated and irregular arch (2) from E.S.E. through zenith to W.N.W., with prismatic streamers quivering and in rapid motion, drifting towards S. The sky from E.S.E. to N.N.W. and to 60° alt. is more or less covered with aurora (1 to 2), brightest at 40° alt. (Declinometer and vertical force disturbed.)	315	306	O.S.
— 5 53	— 9 30	Bright curtain-shaped aurora (2) from N.N.W. to zenith. Two arches from E.S.E. to N., alt. 15° and 30° (1).			
— 5 57	— 9 34	Aurora faint (·7) - - - - -			
— 6 0	— 9 37	- - - - - - - -	436	275	197
— 6 17	— 9 54	Irregular diffused aurora (1 to 1·5) from E.S.E. to N.N.W., from 10° alt to 70° alt.			
— 6 28	— 10 5	Diffused arch (1) from E.S.E. to N.N.W., 70° alt. Faint masses on horizon from E.S.E. to E. Faint arch (·3) from S.E. to W.S.W., 5° alt.			
— 7 28	— 11 5	Arch (1) from S.E. through Orion to W.N.W. Another diffused arch (·7) from E.S.E. through zenith and Leo to N.W.			
	A.M.				
— 8 28	9 12 5	Two arches, one from E.S.E. through Arcturus, Leo, and Pleiades to N.W., and the other from S.E. through Spica and Procyon to W.N.W. (1).			
— 9 28	— 1 5	Arch from S.E. to W.N.W., 60° alt. (1) - -			
— 10 28	— 2 5	Ditto - - - - - -			
— 11 28	— 3 5	Irregular arch (1) from S.E. to N.W., 25° alt. Many streamers (1) in rapid motion just above S.W. horizon.			
P.M.					
— 12 28	— 4 5	Irregular aurora (·5) from E.S.E. through zenith to N.N.W. Patches of aurora (1) on horizon from E. to N.W. Bank of aurora (·3) from S. to W., 8° alt. (Magnetic disturbance.)			
A.M.	P.M.				
10th 3 33	— 7 10	Part of arch (1) from S.E. extending 90° towards N.W., 40° alt.			
— 4 28	— 8 5	Arch from E. to N.W. (1·5), curtain-shaped and diffused in E., 45° alt.			
— 5 28	— 9 5	Arch (1) from E.S.E. passing just below Arcturus to N.W.			
— 6 28	— 10 5	Ditto - - - - - -			
— 7 20	— 10 57	No aurora - - - - - -	434	320	576
— 7 23	— 11 0	- - - - - - - -	432	319·5	553
— 7 28	— 11 5	Arch (·5) from E.S.E. to N.N.W., 30° alt. Mass of aurora from E.S.E. horizon to 5° alt. Band from E.S.E. to N.E., 15° alt.	129	322	564
	A.M.				
— 8 28	10 12 5	Diffused arch (1) from E.S.E. to N.W., 45° alt. Irregular diffused arch (·5) from E. to N.N.W., 30° alt. Faint patches along N. horizon.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. March. h. m.	1883. March. d. h. m.				
A.M.	A.M.				
10th 9 19	10 12 56	Sky from E.S.E. to N.N.W. to 20° S. of zenith covered with aurora (1).	291	365	300
— 9 23	— 1 0	- - - - - - - - -	360	340	150
— 9 28	— 1 5	The same portion of sky nearly covered with faint patches and streaks; on N. horizon brightest (·3). (Magnetic instruments much disturbed.)	393	346	350
— 9 59	— 1 36	Faint aurora (·3) from E.S.E. to N.N.W., from 5° to 15° alt. Streak (·5) in S.W., 10° to 25° alt.			
— 10 28	— 2 5	Bank of aurora (·3) from E.S.E. to N.N.E. to 6° alt. Mass of aurora (·5) in N.N.W., 10° to 35° alt.			
— 11 28	— 3 5	Faint patch (·5) on E. horizon and N.E. 3° alt. -			
	P.M.				
11th 6 28	— 10 5	Mass of streamers (·5) from N.N.W. horizon to 10° alt. -			
— 7 28	— 11 5	Aurora (·7) from E.S.E. horizon to zenith - -			
	A.M.				
— 8 28	11 12 5	Aurora (·7) visible between clouds in E.S.E., 15° alt., and in zenith. Bright aurora (1) from W.N.W. horizon to 20° alt.			
— 9 17	— 12 54	Bright irregular aurora (1·5) from N.W. to N.E., with streamers in rapid motion from 15° to 40° alt.	393	312	178
— 9 23	— 1 0	- - - - - - - - -	402	314	173
— 9 28	— 1 5	The same but faint (·5). Bright prismatic vertical streamers (2) in rapid motion from N.E. to E.S.E. (Magnetic disturbance.)	377	324	160
— 9 57	— 1 34	Faint masses of aurora (·5), like small cumulus clouds, covering the zenith and to 30° alt. N.W.			
— 10 28	— 2 5	Bright arch (1) from E.S.E. to W., 25° alt. Bright diffused rays (2), slightly prismatic, from N.N.W. to zenith.			
— 11 28	— 3 5	Arch (1) from S.E. to W.N.W., 45° alt. in S. - -			
P.M.					
— 12 28	— 1 5	Above arch 60° alt. Band from 45° alt. in E. through zenith to N.W. (1).			
A.M.	P.M.				
12th 7 28	— 11 5	Three faint tapering streaks emerging from E. horizon to 30° alt.			
	A.M.				
— 8 28	12 12 5	Faint band (·7) from E.S.E. through Arcturus and zenith to N.W.			
	P.M.				
13th 5 28	— 9 5	Arch (2) 6° S. of zenith, visible between clouds in S.E., 45° alt., and light in N.N.E., 30° alt., visible through clouds.			
— 6 28	— 10 5	Corona (2). Light visible between clouds in S., 45° alt., and in E., 30° and 50° alt.			
P.M.	A.M.				
— 12 28	13 4 5	Faint streak (·3) in zenith. Faint masses of aurora (·5) from S. to S.W., 10° alt.			
— 1 28	— 5 5	Bright prismatic curtain-shaped aurora (2) in W., 5° alt., partly visible between clouds, and drifting towards W.S.W.			
A.M.	P.M.				
14th 6 28	— 10 5	Arch (1) from S.E. to W., 50° alt. - - -			
— 7 8	— 10 45	„ (1·5) with streamers from E.S.E. to N., alt. 10° -			
— 7 28	— 11 5	Streamers extending irregularly from 50° alt. to 5° alt. in E.S.E., and N. at 50° alt. (1), other parts (1·5). Faint arch (·5) from E.S.E. to W.N.W., 25° alt. towards S.			
— 7 43	— 11 20	Streamers (·7) from 5° alt. in N. to 5° S. of zenith -			
	A.M.				
— 8 28	14 12 5	Arch (1·5) from N.W. to S.E., 10° alt., and extending in masses of diffused and striated aurora with streamers to E.S.E.			
— 9 28	— 1 5	Arch (1) from E.S.E. to N., 10° alt. Diffused arch (1) with streamers from 15° alt. in N.E. to S.E., 70° alt. The whole sky from S. to W. and zenith covered with aurora (·5). (Magnetic disturbance.)			
— 10 28	— 2 5	Faint arch (·5) from E.S.E. to W., 10° alt. Faint masses at intervals from N.N.E. to E., alt. 5° (·5).			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. March. h. m.	1883. March. d. h. m.				
A.M.	A.M.				
14th 11 28	14 3 5	Band from E.N.E. to N.W. through Ursa Major (1). Arch from S.E. through Spica to W.N.W. (1).			
P.M.					
— 12 28	— 4 5	Aurora, like cumulus clouds, from S.E. to W.N.W., extending from 45° alt. in S. to zenith (·5 to 1).			
A.M.	P.M.				
15th 4 20	— 7 57	Arch from E.S.E. to N., 35° alt., very faint except in E.S.E., where (·7).			
— 4 30	— 8 7	Ditto - - - - - -			
— 4 40	— 8 17	Arch disappeared except a very faint patch in E.S.E. -			
— 4 55	— 8 32	Ditto - - - - - -			
— 5 0	— 8 37	Faint streamers (·3) in N.N.W. to 50° alt. Faint patch on E.S.E. horizon.			
— 5 5	— 8 42	Arch (·5) with streamers in N.N.W. from N.N.W. to E.S.E., 30° alt.			
— 5 10	— 8 47	Arch very faint except at extremities and alt. 25° - -			
— 5 20	— 8 57	„ uniform (·7), alt. 50° - - - -			
— 5 25	— 9 2	„ through zenith (1) and diffused in N.N.W. -			
— 5 35	— 9 12	„ irregular and from E.S.E. through zenith to N.W., where striated.			
— 5 40	— 9 17	„ diffused and (·5) - - - - -			
— 5 45	— 9 22	Above arch very faint in zenith - - - -			
— 5 50	— 9 27	Ditto - - - - - -			
— 5 55	— 9 32	„ drifting towards S. and (1) - - -			
— 6 0	— 9 37	„ faint (·5) diffused and through zenith -			
— 6 5	— 9 42	Ditto - - - - - -			
— 6 10	— 9 47	„ (1) in E.S.E. and irregular to 15° alt. - -			
— 6 15	— 9 52	„ very faint (·3) and alt. 80° in S. - -			
— 6 20	— 9 57	„ from E.S.E. to W. (1·5), with streamers, and 50° alt. in S.			
— 6 30	— 10 7	„ through Leo just passing Pleiades (1·5) - -			
— 6 35	— 10 12	„ through zenith - - - - - -			
— 6 40	— 10 17	„ (1) - - - - - - -			
— 6 45	— 10 22	Ditto - - - - - - -			
— 6 50	— 10 27	„ through Leo, and just passing the moon (1) -			
— 6 55	— 10 32	„ from E., through zenith, diffused in E., and vertical streamers (1).			
— 7 0	— 10 37	„ 45° alt. in N.W.			
— 7 5	— 10 42	Ditto, and masses of light in E.N.E. horizon (2) -			
— 7 10	— 10 47	Above arch from S.E. through Leo and the Moon, and diffused masses, like cumulus clouds, (1·5).			
— 7 15	— 10 52	Double arch from E.S.E., one through Ursa Major and one through the Moon and Pleiades (2), also pyramid-shaped aurora in E.N.E. to 30° alt.			
— 7 20	— 10 57	Ditto - - - - - -			
— 7 30	— 11 7	„ like a semicircle from N.E. through zenith to N.W. (2).			
— 7 35	— 11 12	„ fainter (1) - - - - -			
— 7 40	— 11 17	Irregular windings from N.E. towards S.E. and through zenith to 45° alt. in N.W. (1·5).			
— 7 45	— 11 22	Above aurora diffused and (1) - - - -			
— 7 50	— 11 27	Ditto - - - - - -			
— 7 55	— 11 32	Diffused auroral light from 30° alt. through zenith and the Moon to N.W. (1).			
— 8 0	— 11 37	Irregular arch (2) from S.E. through Spica and Leo to W.N.W.			
— 8 5	— 11 42	„ pulsating and curtain shaped in S.E. (1) -			
— 8 10	— 11 47	Arch from S.E. through Leo and Ursa Major to N.W., slightly prismatic and diffused in S.E. (1·5).			
— 8 15	— 11 52	Arch from E.N.E. through Arcturus and zenith to N.W., slightly prismatic and in rapid motion (1·5).			
— 8 20	— 11 57	Arch motionless and (1) - - - -			
	A.M.				
— 8 25	15 12 2	Broad arch (1·5) from E. to N.W., 80° alt. - -			
— 8 30	— 12 7	Arch (1·5) from S.E. through zenith to N.W., in rapid motion at zenith.			

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. March. h.m.	1883. March. d. h. m.				
A.M.	A.M.				
15th 8 32	15 12 9	Arch brighter and prismatic - - -			
— 8 35	— 12 12	Curtain-shaped aurora (1·5) all over the sky, with less motion.			
— 8 40	— 12 17	„ very faint; the greater part disappeared -			
— 8 45	— 12 22	„ disappeared. Arch (1·5) from S.E. to N.W., 30° alt., prismatic.			
— 8 55	— 12 32	Patches (·7) from S.E. to N.W., 25° alt. - -			
— 9 5	— 12 42	Arch (1) from E. to N.W., 30° alt. - - -			
— 9 15	— 12 52	„ disappeared. Diffused light in N.W., 25° alt. -			
— 9 20	— 12 57	Faint patches (·5) from E.S.E. to N.N.W. on horizon. Faint aurora from E.S.E. to zenith (·3).			
— 9 22	— 12 59	Band (1) from N.N.E. to N., 8° alt. Mass of aurora (·5) in N.N.W., 5° alt.			
— 9 30	— 1 7	Patch in N.N.W., 30° alt. Arch (1) from E.N.E. to N.N.W., 35° alt.			
— 9 35	— 1 12	Arch (·3) 45° alt. from E.N.E. to N.N.W. - -			
— 9 40	— 1 17	„ irregular (·5) and 25° alt. - - -			
— 9 45	— 1 22	„ disappeared except a faint patch in N.N.W., 20° alt.			
— 9 50	— 1 27	Very faint patch on horizon in E.S.E. - - -			
— 9 55	— 1 32	Faint streak from N.N.W. to zenith (·3) - -			
— 10 0	— 1 37	Arch (·3) from E.S.E. to W., 45° alt. Faint aurora (·2) from E.S.E. to N.N.W., 35° N. of zenith.			
— 10 5	— 1 42	Above arch brighter (·5) and the faint aurora (·3) and through zenith.			
— 10 10	— 1 47	Above arch diffused, and the aurora through zenith brighter (1) and striated.			
— 10 15	— 1 52	Faint streaks in zenith. Two arches (·5) from E.S.E. to W., 45° and 55° alt.			
— 10 20	— 1 57	Lower arch as before. The other irregular (·3) and 75° alt.			
— 10 25	— 2 2	Both arches very faint - - - -			
— 10 40	— 2 17	Ditto - - - -			
— 10 55	— 2 32	Ditto - - - -			
— 11 0	— 2 37	Upper arch disappeared, the other (·2) and alt. 35° -			
— 11 20	— 2 57	Arch as before. Diffused band from E.N.E. through zenith to N.N.W. (·5 to 1), brightest in E.S.E.			
— 11 25	— 3 2	Band very faint - - - -			
— 11 30	— 3 7	Above band disappeared, and arch much diffused and very faint.			
— 11 45	— 3 22	Aurora disappeared.			
P.M.					
— 12 20	— 3 57	Faint streaks (·3) from S.E. to S.W., 20° alt. - -			
— 12 30	— 4 7	Faint streak in N.N.W., 5° alt. Bank (·5) on horizon from N.N.E. to N.N.W. and to about 5° alt.			
— 12 45	— 4 22	Arch (·5) from N.N.E. to N.N.W., 5° alt. - - -			
A.M.	P.M.				
17th 4 28	16 8 5	Mass of aurora (·5) from E. to E.S.E. to 5° alt. Very faint arch from E.S.E. to N.N.W., 25° alt.			
	A.M.				
— 8 28	17 12 5	Faint streak (·5) in N.N.W., 15° alt. Masses of aurora (1) in E. from 5° to 10° alt.			
— 9 28	— 1 5	Faint masses of aurora (·5) from N.N.W. to zenith, like small cumulus clouds.			
— 10 28	— 2 5	Arch with streamers from E.S.E. to N.E., 15° alt. Very faint except in N.E. (1·5).			
— 11 28	— 3 5	Arch from S.E. to W.N.W., 60° alt. in S. (·7), and streaks through zenith (·5).			
	P.M.				
18th 5 28	— 9 5	Faint arch (·5) from E.S.E. to N., 35° alt. - -			
— 6 28	— 10 5	Patches on E.S.E. horizon (1) - - - -			
	A.M.				
— 8 58	18 12 35	Faint arch from E.S.E., the lower edge just passing through β Cassiopeiæ to 50° alt. in N.W., and a streak from Cassiopeia extending nearly to Polaris.			
— 11 23	— 3 0	Faint streak (·3) from E.S.E. to 25° alt. Another faint streak on N.N.W. horizon.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. March. h. m.	1883. March. d. h. m.				
P.M.	A.M.				
18th 12 28	18 4 5	Faint arch (·3) from E.S.E. to N.W., 50° alt. Faint streaks from N. to W., alt. 8° (·5).			
A.M.	P.M.				
19th 6 28	— 10 5	Band from E.S.E. (1), lower edge just passing Arcturus about half the moon's breadth above Alcor and through Cassiopeia to N.W.			
— 6 53	— 10 30	Irregular arch (·5) from E.S.E. through zenith to N.N.W.			
— 7 28	— 11 5	Irregular and striated arch (1) from E.S.E. to N.N.W., 80° alt., passing 2° S.W. of Capella and 3° S.W. of β Ursæ Majoris and through Bootes.			
	A.M.				
— 8 28	19 12 5	Faint irregular arch (·5) from E.S.E. to N.N.W., 75° alt.			
— 9 28	— 1 5	Irregular aurora (1) from E.S.E. to N.N.W., from 60° to 70° alt.			
— 10 28	— 2 5	Faint aurora (·5) on horizon from E.S.E. to N.N.E., and a few streaks in zenith (·5 to 1).			
P.M.					
— 12 28	— 4 5	Faint aurora (·5) from N.N.W. horizon to 15° alt.			
A.M.					
21st 10 28	21 2 5	Diffused light from S.E. through zenith towards N.W.			
— 11 28	— 3 5	Arch (1) from S.E. to S.W., 25° alt.			
— 11 33	— 3 10	Above arch striated and with a greenish glow, pulsating from S. to W., 15° alt. Streamers (1) in N.N.W.			
P.M.					
— 12 28	— 4 5	Arch (1) from S.E. to W., 50° alt. Streak from N.W. to zenith (1).			
A.M.	P.M.				
22nd 4 28	— 8 5	Diffused light from S.E. to Cassiopeia, upper edge through the moon, Procyon, and Betelgeuse; lower edge through Arcturus and Alcor (1).			
— 5 28	— 9 5	Two bands from S.S.E., one about 6° above the Moon to Cassiopeia, the other about 7° S. of the Moon and just through Orion (1).			
— 6 28	— 10 5	The sky from 35° alt., to Rigel is covered with light in the shape of bands and clouds, the most northern being the brightest (1·5).			
— 7 28	— 11 5	Irregular arch (1) from E.S.E. to N.W., 1° below the Moon. Curtain-shaped aurora parallel to horizon (2), slightly prismatic from S. to S.W., from 15° to 20° alt.			
— 8 3	— 11 40	Arch (·5) S.E. to S.W., 20° alt. Mass of aurora (1) in N.W. from 8° to 15° alt.			
— 8 20	— 11 57	Irregular arch (2) with a greenish glow from S.E. through zenith to N.N.W. Much aurora, like cumulus clouds, from S. to N.W. (1). (Magnetic disturbance.)			
	A.M.				
— 8 28	22 12 5	Band (1) from S.E. through W. to E.N.E., 60° alt.			
— 9 3	— 12 40	Irregular arch (1) from E.N.E. to N.N.W., 10° alt., and a few streamers in N.W. 15° alt. (1).			
— 9 28	— 1 5	Patches (1) from N.N.W. to E.S.E., 3° to 15° alt., highest in N.N.W.			
— 10 28	— 2 5	Imperfect arch (·5) from S.E. to S.W., 15° alt.			
— 11 3	— 2 40	Irregular aurora (1) from S.E. to N.W., 25° alt., pulsating and with a greenish glow.			
— 11 28	— 3 5	Faint streaks in zenith and N.N.W., 15° alt (·5). Bright irregular aurora (1·5) from S.S.E. to S.S.W., with streamers in rapid motion, slightly prismatic, and drifting towards S.E., 10° alt.			
— 11 59	— 3 36	Bright irregular diffused arch (1) from 40° alt. in E.S.E. through zenith to 30° alt. in N.N.W.			
P.M.					
— 12 28	— 4 5	Bright irregular aurora (1) of a greenish colour from E. to N.N.W., 15° alt. Faint streak in E.S.E.			
A.M.	P.M.				
23rd 4 28	— 8 5	Irregular arch (1) from E.S.E. to N.N.W., 70° alt.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. March. h. m.	1883. March. d. h. m.				
A.M.	P.M.				
23rd 5 28	22 9 5	Arch (1) from E.S.E. to N.N.W., 80° S. of zenith. Irregular arch (·5) from the same points 60° N. of zenith.			
— 5 53	— 9 30	Irregular, striated aurora (2) slightly prismatic, from W. through zenith to E.N.E., in rapid motion. (Magnetic disturbance.)			
— 5 56	— 9 33	- - - - - - - - -	259	330	0
— 6 1	— 9 38	Irregular arch (1) with streamers from N.N.W. to E.S.E., 8° alt., and several streamers (1·5) in N.N.W., 15° alt.	295	284	375
— 6 23	— 10 0	- - - - - - - - -	256	328	402
— 6 26	— 10 3	Above arch 25° alt. Aurora extending horizontally 35° to N.W. (2), and about 10° wide, joining a mass of irregular folds in N.N.W. (1).	274 70	319 265	389 100
— 6 57	— 10 34	Several streaks in zenith (1) - - - - -	145	310	693
— 7 0	— 10 37	- - - - - - - - -	102	284	760
— 7 1	— 10 38	Irregular arch (2) from E.N.E. to N.N.W. with a greenish glow, 5° alt.	178	265	696
— 7 17	— 10 54	Aurora (1) from E.N.E. to N., 3° alt. Streak (1) from 60° alt. in E. to zenith.			
— 7 28	— 11 5	Patch (·7) on N.N.E. horizon - - - -			
— 7 58	— 11 35	Bright patches (1·5) on N. horizon, and to 5° alt. -			
	A.M.				
— 8 28	23 12 5	Faint patch in N.N.W., 3° alt. (·7) - - -			
— 8 57	— 12 34	Irregular aurora (1) from N.N.W to E., 15° alt. - -			
— 9 28	— 1 5	„ arch (1) from W. to N.N.E., 20° alt. - -			
— 9 59	— 1 36	Faint patch in N.N.W., 5° alt. (·7) - - -			
— 10 28	— 2 5	„ „ N. 15° alt. (·5) - - - -			
— 11 28	— 3 5	Band (1) extending about 70° from N.W., alt. 35° -			
	P.M.				
24th 4 30	— 8 7	Faint diffused arch (·5) from E.S.E. through zenith to N.N.W.			
— 5 20	— 8 57	Irregular aurora from 10° alt. in N.N.W. to zenith, and extending to E. (·5 to 1), brightest in N.N.W.			
— 5 28	— 9 5	Bright band of aurora (1·5) from E.S.E. to N.N.W., 20° alt. Faint horizontal line of aurora (·3) from E. to E.N.E., 3° alt.			
— 6 20	— 9 57	Faint diffused arch (·5) from 15° alt. in E.S.E. through zenith to 20° alt. in N.N.W.			
— 6 28	— 10 5	Very faint masses of aurora (·3) from E. to E.N.E., 15° alt.			
— 7 21	— 10 58	- - - - - - - - -	366	308	689
	P.M.				
— 7 23	— 11 0	Curtain-like folds of aurora in zenith and from thence to N.W. horizon (2).	369	304	699
— 7 25	— 11 2	- - - - - - - - -	402	304	645
— 7 26	— 11 3	Arch (1) from 45° alt. in S.E. through zenith towards N.W.			
— 7 28	— 11 5	Arch (3) from S.E. through Arcturus and zenith to N.W., prismatic streamers in N.N.W.	240	—	400
— 7 41	— 11 18	Aurora disappeared - - - - -	220	300	600
— 8 3	— 11 40	Arch (1·5) from E.S.E. to N.W., 50° alt., and a faint streak parallel to the arch 6° N. of zenith.			
— 8 23	— 12 0	Faint patches in and round zenith, hardly perceptible. Arch (1·5) from E.S.E. to N.W., about 20° alt.			
	A.M.				
— 9 23	24 1 0	Faint arch (·3) from E.S.E. through zenith to N.W. -			
	P.M.				
25th 4 28	— 8 5	Arch (1), the lower edge passing 10° above Arcturus and the upper Alcor.			
— 5 23	— 9 0	- - - - - - - - -	415	315	—
— 5 28	— 9 5	„ through Leo, Ursa Major, and zenith, upper edge brightest, (1·5); lower very faint. (Instruments not disturbed.)			
— 5 48	— 9 25	Arch as before, and with prismatic streamers in lower edge about 15° wide at zenith (2).	328	334	—
			—	322	—
— 6 0	— 9 37	„ disappeared. Arch (1) from E. to N.W. through Vega.	380	310	—
			—	307	—

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. March. h. m. A.M.	1883. March. d. h. m. P.M.				
25th 6 23	24 10 0	Diffused arch (2) from E.S.E. to N.W., upper edge crossing Ursa Major in the middle.			
— 6 59	— 10 36	Arch (1) from E.S.E. to N.W., 70° alt. Arch (·5) from E.S.E. to N.N.W., 25° alt. Mass of diffused irregular aurora (·5) about 15° alt. in N.N.W. to zenith, and about 10° wide.			
— 7 21	— 11 1	Patch (1) with a greenish glow in E.S.E., 10° alt. -			
— 7 29	— 11 6	Arch (1) from E.S.E. to N.N.W., 35° alt. and irregular in form. Faint aurora in zenith about 5° wide.			
— 7 58	— 11 35	Irregular striated arch (1) from E.S.E. to N.N.W., 35° alt.			
— 8 1	— 11 38	„ very faint - - - - -			
	A.M.				
— 8 28	25 12 5	„ diffused, and alt. 30° to 35° (1) - -			
— 9 26	— 1 3	„ irregular (1) and through zenith - -			
— 10 28	— 2 5	Aurora (1·5) from N.N.W. to N.N.E. parallel to horizon, alt. 25°.			
— 11 28	— 3 5	Faint horizontal streak from N. to N.N.E., 10° alt. (·5) -			
	P.M.				
26th 4 28	— 8 5	Diffused arch (·5) from E.S.E. to N.N.W., from 70° to 80° alt.			
— 4 37	— 8 14	Irregular diffused arch from E.S.E. through zenith to about 45° alt. in N.N.W., brightest from E.S.E. to zenith (·5 to 1).	425	308	—
— 5 28	— 9 5	Irregular mass of aurora (1) in E.S.E. Arch (1) from E.S.E. through zenith to N.N.W. Irregular arch (·5) from the same point to N.W., 45° alt.			
— 6 28	— 10 5	Parallel streaks (·8) from E.S.E. to N.N.W., from 75° to 90° alt.			
— 7 5	— 10 42	Arch (1) from S.E. to N.W., 30° alt. Faint diffused arch (·5) from E.S.E. through zenith to N.N.W.			
— 7 23	— 11 0	Arch (1·5) from S.S.E. to S.W., 5° alt. Irregular aurora (1) from E.S.E. to 30° alt. in W., 45° alt.			
— 7 28	— 11 5	Arch (1·5) from S.E. to W., 45° alt. Faint streamers (·5) in E.S.E.			
— 8 20	— 11 57	Bright, broad, irregular band (2) with prismatic vertical streamers in rapid motion, from E.S.E. to N.N.E., 15° alt. (Magnetic disturbance.)	279	283	590
— 8 23	— 12 0	- - - - - - - - -	281	311	1000
	A.M.		290	304	1110
— 8 28	26 12 5	Aurora, faint, and like small cumulus clouds from N.N.W. to E.S.E. (·7). Streamer (·7) from 10° alt. in S.S.W. to zenith.			
— 8 34	— 12 11½	Faint diffused arch through zenith from E.S.E. to N.N.W. (·5).			
— 8 35	— 12 12	- - - - - - - - -	348	314	1132
— 8 58	— 12 35	- - - - - - - - -	386	312	1061
— 9 0	— 12 37	Bright, diffused, and striated masses of light, of a greenish hue, from E.S.E. horizon to 15° alt. Arch (1) from E.S.E. to W.N.W., 70° alt.	357	318	1071
— 9 2	— 12 39	- - - - - - - - -	332	318	993
— 9 3	— 12 40	Bright, prismatic, diffused light in zenith (2) - -			
— 9 20	— 12 57	Irregular aurora (·5) from E.S.E. to N., where brighter (2), with streamers slightly prismatic, 30° alt.			
— 9 28	— 1 5	Bright serpentine arch (2) from N.N.W. through zenith to E.S.E., slightly prismatic; and with streamers pulsating on N. edge. Faint diffused light on horizon from E.S.E. to E. (·5).			
— 9 57	— 1 34	Diffused and irregular arch from E. through zenith to W.; (1·5) from E. to zenith, and (·7) from W. to zenith.			
— 10 28	— 2 5	Very faint irregular arch from E.S.E. to S.W., 30° alt. -			
— 11 23	— 3 0	Patches and streaks all over the sky - - -			
P.M.					
— 12 23	— 4 0	Arch (1·5) from S.S.E. to W.N.W., passing about 6° above the moon.			
— 12 46	— 4 23	Faint arch from N.N.E. through Ursa Major to S.S.W. -			

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. March. h. m. A.M.	1883. March. d. h. m. P.M.				
27th 3 50	26 7 27	Faint irregular aurora (·5) in E.S.E. from horizon to 40° alt. Bright (1·5) irregular aurora of a light brown colour in E.S.E. from 5° to 15° alt., and about 5° S.E. of the above.	—	304	—
— 3 53	— 7 30	,, disappeared - - - - - -			
— 4 1	— 7 38	Faint irregular arch (·5) from E.S.E. horizon to 30° of N. horizon, 40° alt.	—	317	—
— 4 21	— 7 58	- - - - - - - - -	276	347	−30
— 4 22	— 7 59	Bright masses of aurora (1) from E.S.E. to S.E., 20° alt., like small cumulus clouds. Bright large patch of a greenish colour (2) on E. horizon. Streak (1) in W.N.W., 15° alt.			
— 4 23	— 8 0	- - - - - - - - -	268	355	−30
— 4 25	— 8 2	- - - - - - - - -	261	349	−100
— 4 28	— 8 5	Bright streamers (1·5) from W. to S.W., 10° alt. Bright irregular aurora (1·5) from N.N.W. horizon to 40° alt. Bright irregular aurora (2·5) from E. to N., with prismatic streamers in rapid motion, 3° alt.			
— 4 57	— 8 34	Faint, wide, irregular arch (·7) from E.S.E. through zenith to N.W., diffused and 15° in width from zenith to N.W. Bright irregular masses of aurora on horizon from E. to E.N.E. (1).			
— 5 18	— 8 55	Diffused arch (·7) from E.S.E. through zenith to N.N.W. Bright irregular masses (1) on horizon from E. to E.N.E.			
— 5 26	— 9 3	Bright curtain-shaped aurora (1·5) from N. and N.W. to zenith.			
— 5 28	— 9 5	Bright, slightly prismatic streamers in N.N.W. to alt. 30°, and in E.S.E. to 20° alt. (1·5). Faint irregular arch (·5) from S.E. to W., 5° alt.			
— 5 57	— 9 34	Diffused arch (1) from E.S.E. through zenith to N.N.W. Irregular arch (·7) from E.S.E. to E.N.E., 5° alt. Arch (·7) from S.E. to W.S.W., 5° alt.			
— 6 28	— 10 5	Diffused and striated arch from E.S.E. to N., 80° alt. (1). Faint arch from S.E. to W., 10° alt. (·5). Faint patches (·5) on E. horizon.			
— 6 43	— 11 20	Curtain shaped aurora (1·5) in, and S.E. of zenith, thence a curve passing the Moon to E.S.E.			
— 8 23	12 0 A.M.	- - - - - - - - -	371	301	728
— 8 28	27 12 5	Arch from S.E. through Leo and Betelgeuse, to W.N.W. Streamers all along the arch (2).	228	392	1130
— 9 0	— 12 37	Corona (2) in zenith and masses of light in S.W. and S.E. (1).	264	358	1015
			261	370	830
— 9 23	— 1 0	Arch (3) slightly prismatic from 45° alt. in S.E. through zenith, the sky from zenith to S.S.E. and S.W. more or less covered with irregular masses of aurora (1·5). (Instruments disturbed.)	280	300	1100
			301	278	1360
			291	314	1073
— 9 44	— 1 21	Sky nearly covered with streaks (1) and with fainter patches and streamers.	245	305	1114
— 10 0	— 1 37	Mass of light (2) in zenith and as above - -	256	216	829
			262	223	731
			238	288	1065
— 10 28	— 2 5	Aurora partly disappeared - - -			
— 11 23	— 3 0 to	Bar of a greenish colour (1·5) parallel to horizon from N.N.W. to N. Faint mass (·5) from S.E. to S. and			
— 11 28	— 3 5	from horizon to 10° alt.			
	d. h. m. s.				
— 11 57	— 3 34 30	Streaks and streamers (1) in N.N.W., from 5° to 15° alt.			
P.M.	d. h. m.				
— 12 1	— 3 38	,, ,, Bright aurora (1·5) striated and with a greenish glow from E.S.E. to N., 30° alt.			
— 12 21	— 4 1	Streamers (1) in N.N.W., 15° alt. Bright patch (1·5) in S.W., 25° alt.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. March. h. m. P.M.	1883. March. d. h. m. A.M.				
27th 12 28	27 4 5	Arch (2) from S.W. to N.N.W., 40° alt. Streaks (1) from E.N.E. to zenith, and faint aurora from S. to S.W. to 10° alt.			
— 12 57	— 4 34	No aurora visible - - - - -			
A.M.	P.M.				
28th 3 53	— 7 30	Arch (·7) from S.E., extending about 90° towards N.W., 60° alt.			
— 4 5	— 7 42	Arch (·7) from S.E. through zenith to N.W. - -			
— 4 26	— 8 3	Arch (1) from S.E. to 45° alt. in W.N.W., lower edge covering Regulus.			
— 4 42	— 8 19	Arch (2) very diffused and slightly prismatic in S.E. -			
— 4 48	— 8 25	„ through zenith (No magnetic disturbance) - -			
— 5 3	— 8 40	„ N. edge through zenith, S. edge just passing Betelgeuse.			
— 5 8	— 8 45	Arch still diffusing and increasing in brightness, brightest part covering Arcturus (3).			
— 5 16	— 8 53	Arch from E.S.E. to N.W. and about 35° wide, the zenith being the centre (3).			
— 5 23	— 9 0	Two arches, one from E.S.E. through zenith to N.W. (2), the other from S.E. passing between Orion and Betelgeuse to W.N.W. (1·5); the former pulsating in zenith.			
— 6 3	— 9 40	Arch (2) from S.E. through Procyon, the lower edge immediately passing γ, δ, ϵ, Orionis to 30° alt. in W.N.W. Prismatic and with a circular motion. Streamers nearly all along the arch from the lower edge almost to the upper. (Instruments disturbed.)			
— 6 23	— 10 0	Diffused arch (2) from S.E. to N.W, the N. edge nearly covering Arcturus and just passing S. of Ursa Major, lower edge passing a little above Spica and below Betelgeuse, pulsating and moving towards N.W.			
— 7 3	— 10 40	Diffused and striated arch (2) from E. through Ursa Major to W.N.W., about 45° wide.			
— 7 28	— 11 5	Mass of aurora in S.S.E., 5° alt.; from it an arch (1) to W.N.W., 10° alt.; another arch from the same to N.W., 40° alt. (1). Nearly the whole sky S. of zenith covered with aurora (·5 to 1), brightest in S.E.			
— 7 57	— 11 34	Folds of curtain-shaped aurora (1) in E.S.E., from 5° to 25° alt. Mass of aurora (1) in S.W., 30° alt. Streaks (1) in N.N.W., 20° alt.			
— 8 14	— 11 51	The whole sky nearly covered with aurora (1 to 2), prismatic and in confused motion, brightest in N.N.W.	{−230 −210 −215	198 460 560	1100 100 1600
— 8 21	— 11 58	Sky nearly covered with aurora (1) - - -	−100	270	1263
— 8 23	— 12 0	- - - - - - - -	−35	388	700
— 8 25	— 12 2	- - - - - - - -	+18	250	200
	A.M.				
— 8 28	28 12 5	Arch (1) from E.S.E. to N.N.W., 10° alt., with streamers (2) pulsating rapidly. Streaks (1) in zenith.			
— 8 59	— 12 36	Faint aurora (·5) in N.N.W. from horizon to 5° alt. -	{ 218	358	658
— 9 0	— 12 37	- - - - - - - -	{ 270 272	345 347	641 625
— 9 28	— 1 5	Faint aurora (·5) from S. to S.W., from 10° to 15° alt. A few parallel streaks from N.N.W. to zenith (1).			
— 9 59	— 1 36	Arch (1) from E.S.E. to N.N.W., 15° alt., patch in N.W., 30° alt. (1).			
— 10 28	— 2 5	Irregular arch (·5) from E.S.E. to N.N.W., 20° alt. -			
— 11 8	— 2 45	Faint streamers (·5) from E.S.E. to N. and zenith -			
— 11 28	— 3 5	Faint aurora (·3) from 40° alt. in N.N.W. to zenith. Faint streak (.3) in E., alt. 30°.			
— 11 55	— 3 32	Band (1) from S.E. to S.W., 10° alt. - - -			
P.M.					
— 12 28	— 4 5	Faint irregular diffused arch (·7) from E.S.E. to N.W., disappearing immediately afterwards.			
	— 7 0	- - - - - - - -	—	310	—
A.M.	P.M.				
29th 3 49	— 7 26	Streak (1) in E.S.E., 60° alt. - - - -	—	298	—
— 4 0	— 7 37	Arch (1) from E.S.E. to N.N.W., 80° alt. - -	—	301	—

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. March. h. m. A.M.	1883. March. d. h. m. P.M.				
29th 4 20	28 7 57	Two parallel arches (1) and striated, from E.S.E. through zenith to N.N.W., pulsation from E. to N.			
— 4 28	— 8 5	Mass of striated aurora (1) with a greenish glow in E.S.E., 35° alt. Irregular arch (·5) from S. to W., 25° alt.			
	d. h. m. s.				
— 4 57	— 8 34 30	Arch (1) from E.S.E. to W., alt. 30° - - -			
	d. h. m.				
— 5 2	— 8 39	„ „ Mass of curtain-shaped folds (1·5), prismatic from E.S.E. to S.E., 45° alt.			
— 5 4	— 8 41	Arch (2) from N.N.W. to N.E., prismatic, 20° alt. -			
— 5 28	— 9 5	Streamers (1) from N.W. to N.N.E. in rapid motion, 30° alt. Patches and streamers from S. to S.W., 20° alt.			
— 6 23	— 10 0	Mass of aurora in E.S.E., 35° alt. (1) - - -			
— 7 20	— 10 57	Irregular aurora (1) from E.S.E. to N.W., 70° alt., curtain-shaped and with streamers.			
— 7 28	— 11 5	Masses of aurora (1) from E.S.E. to N.N.W., 70° alt. Irregular diffused and striated arch (·5 to 1·5) from E.S.E. through zenith to N.N.W., where brightest. Faint aurora from S.E. to S.W., 10° alt. (·3)			
	A.M.				
— 8 28	29 12 5	Irregular aurora (·7) from E.S.E. to N., with streamers at extremities, 15° alt. Faint diffused masses in zenith and to 10° alt. in N.W. and S.E. (·5).			
— 9 20	— 12 57	Bright aurora (1) from S.E. to N.W., from 15° to 60° alt. in S. Bright diffused arch (1·5) from E.S.E. to N.N.W. through zenith. Faint irregular masses, like small cumulus clouds, from E.S.E. towards N. to 40° alt. (·7). (Magnetic disturbance.)			
— 9 28	— 1 5	Broad diffused irregular arch (1·5) from E.S.E. through zenith and extending to N.W. and N.N.W. horizon.			
— 9 57	— 1 34	Streaks and streamers (1) in and around zenith. Bright curtain-shaped aurora (1·5) in N.N.W. to 20° alt. Streak (1) in E.S.E. to 10° alt. and in S.W. (1·5) to 10° alt.			
— 9 19	— 1 56	Sky from E.S.E. to N.N.W. and zenith more or less covered with faint aurora. Streak in S. and S.W., 15° alt. (·5).			
— 10 28	— 2 5	As above, except from E.S.E. to E. and from horizon to 15° alt. Bright, vertical, prismatic streamers (2) in rapid motion from E. to E.S.E., 5° alt.			
— 10 29	— 2 6	The whole very faint - - - - - - - -			
— 10 57	— 2 34	Very faint masses in N.W., 15° alt (·3) - -			
— 11 28	— 3 5	Curtain-shaped masses of aurora in S. and S.W., 45° alt. (1).			
	P.M.				
— 4 28	— 8 5	Arch (·7 to 1) from N. to E.S.E., 60° alt., confused, and of a greenish colour, brightest in E.S.E.			
— 4 58	— 8 35	Faint aurora (·7) from E. to N.E., alt. 5° - - -			
— 5 28	— 9 5	Arch (·5 to 1) from E.S.E. to N., 5° alt., streamer in N., and brightest in E.S.E. Faint streak (·3) in N.N.W. to 10° alt.			
— 6 28	— 10 5	Faint patch (·5) on E.S.E. horizon. Streak (·7) in zenith.			
— 7 23	— 11 0	- - - - - - - - -	105	316	437
— 7 28	— 11 5	Arch (1) from E.S.E. to N.W., lower edge just passing Areturns through Leo.			
— 7 48	— 11 25	Broad, diffused arch through zenith, about 15° wide from N.W. to S.E. (1·5).	391·5	316	417
	A.M.				
— 8 53	30 12 3	Arch from S.E. through zenith to N.W. (1·5), of a serpentine shape in S.E.			
30th 9 3	— 12 40	Masses of aurora from E. and S.E. to N.W., about 45° wide, the centre passing through zenith (1·5).			
— 9 23	— 1 0	Arch (1·5) from E.S.E. to N.W. through Ursa Major -			
— 10 28	— 2 5	Half the sky covered with aurora (1) - - -			
— 11 28	— 3 5	Arch (·5) from S.E. to N.W., 45° alt. Faint streaks in zenith (·3).			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. March. h. m. A.M.	1883. March. d. h. m. P.M.				
31st 4 28	30 8 5	Arch from S.E. to N.W. through zenith (1) - - -			
— 5 28	— 9 5	Arch from E. to N.W., 45° alt. (·7) - - -			
— 7 28	— 11 5	Faint irregular arch (·5) from E.S.E. through zenith to N.N.W. Faint streak on N. horizon (·5).			
	A.M.				
— 8 28	31 12 5	Patches and streaks (·5) from E.S.E. to N.N.W. and in zenith.			
— 9 28	— 1 5	Irregular aurora (1) from E.S.E. to the zenith - -			
— 10 23	— 2 0	- - - - - - - - -	316	321	744
— 10 28	— 2 5	Irregular striated arch (1·5) from N.W. through zenith to E.S.E., 5° wide, drifting towards S.W.			
— 11 6	— 2 43	The whole sky covered with faint streamers (·7) and curtain-shraped aurora.	276	328	555
— 11 23	— 3 0	- - - - - - - - -	310	348	685
— 11 28	— 3 5	The whole sky more or less covered with irregular aurora (·7 to 1·5), brightest from W.N.W. to N.E., 15° alt.			
— 12 0	— 3 37	Irregular and diffused arch (1) from W.N.W. through zenith to 30° alt. in E.S.E. Faint masses (·3) in N., 5° alt.			
April.					
1st 4 57	— 8 34	Arch (1) from E.S.E. to N.N.W., 15° alt. - -			
— 5 10	— 8 47	„ (·5 to 1) from E.S.E. to N.N.W., 20° alt., brightest part in N.N.W.			
— 5 21	— 8 58	„ very faint. Striated streak (·5) in N.N.W., 10° to 20° alt.			
— 5 26	— 9 3	Masses of aurora in E.S.E. (1), arch (·5) from E.S.E. to N.N.W., 30° alt.			
— 5 35	— 9 12	Above arch diffused and irregular (1), alt. 60°, and masses of aurora very faint. Faint aurora (·3) from E.S.E. to S.W., 30° alt.			
— 5 47	— 9 24	Arch from E.S.E. to N.N.W., very faint except at extremities (·7), curtain-shaped in N.N.W.; the other arch as before. Masses of aurora (·7).			
— 5 51	— 9 28	Streamers at N.N.W. end of above arch (1) to 30° alt. -			
— 6 1	— 9 38	Arch (·5) from E.S.E. to N.N.W., diffused striated, and through zenith. Arch from E.S.E. to S.W. very faint and 20° alt. in S.W. Another lower arch from E.S.E. to E.N.E. (·3 to ·7), brightest in E.S.E., 5° alt.			
— 6 12	— 9 49	„ disappeared. Two arches from E.S.E. to N.N.W., one passing about 5° S. of zenith, the other about 10° N.E. of zenith, slightly diffused (·7).			
— 6 26	— 10 3	Above arches in one (·7) and through zenith, where about 10° in width.			
— 6 37	— 10 14	„ drifting towards S. lower edge very faint -			
— 6 43	— 10 20	„ (1·5) in E.S.E., and (1) in other parts -			
— 6 50	— 10 27	„ through zenith and much diffused (2) from E.S.E. to zenith, the rest (1·5).			
— 6 56	— 10 33	Above arch of regular brightness (1) except from E.S.E. to 15° alt., where (2) and slightly prismatic; lower edge of arch about 70° alt. in S.W.			
— 7 0	— 10 37	„ about 20° in width and irregular, prismatic streamers on N.E. edge, quivering and in rapid motion (1·5 to 2·5), brightest on N.E. edge.			
— 7 6	— 10 43	„ very irregular and about 10° wide (1). Bright irregular masses of aurora on horizon from E.S.E. towards E., prismatic and (2), about 15° alt.			
— 7 10	— 10 47	„ (·5) except in N.N.W., where (2) with prismatic streamers. Bright masses (1·5) in horizon from E.S.E. to E. to alt. 5°.			
— 7 15	— 10 52	The whole sky from E.S.E. to N.W., 15° alt. and 5° S. of zenith, more or less covered with aurora (·7). Arch (2) with prismatic streamers from N.N.W. to E., alt. 7°.			
— 7 20	— 10 57	Above aurora (·5) except in N.W., where irregular and (1). Arch (1).			
— 7 27	— 11 4	Double arch (1·5) with streamers from E. to N.N.W., 15° alt. Faint (·3) masses from E.S.E. to zenith, and extending to about 5° alt. S.W.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. April. h. m. A.M.	1883. March. d. h. m. A.M.				
1st 7 35	31 11 12	Faint broad irregular aurora from E.S.E. to N.W. (·3) except in N.W. where (·7). Single arch (1) from E.S.E. to N., where striated, 5° alt.			
— 7 40	— 11 17	Aurora very faint and extending to 20° S. of zenith. Arch (1·5) and alt. 7°.			
— 7 45	— 11 22	Aurora disappeared, except arch from N. to N.N.E. (2), and irregular. Very faint arch from E.S.E. to W.N.W., alt. 15° in S.			
— 7 50	— 11 27	First arch now from N.N.W. to E., (2) alt. 5°, other arch as before. Faint streamers (·3) in N.N.W., 15° alt.			
— 7 55	— 11 32	Arches as before. E. end of arch partly hidden behind clouds. Streamers (·7) from 15° alt. to 60° alt. towards E. Faint masses (·5) on N.N.W. horizon.			
— 8 0	— 11 37	Arches as before. Faint streak (·5) in N.E. and zenith			
— 8 5	— 11 42	Arch from N.N.W. to E. now (1), other arch as before. Streaks disappeared.			
— 8 10	— 11 47	Arch now from N.N.W. to E.S.E. where visible through clouds, (1·3) in N.N.W. and 5° alt. Faint masses (·5) in E.S.E., 7° alt.			
— 8 15	— 11 52	Arch now only visible from N.N.W. to E., 7° alt., and (1). Faint diffused aurora (·5) from N.N.W. to zenith.			
— 8 18	— 11 55	Corona in zenith drifting towards N.W. (·6) - -			
— 8 20	— 11 57	Folds of aurora (1·5) in N.N.W. to 15° alt. Faint aurora in N. between clouds. Faint streamers in zenith to Leo.			
	April.				
— 8 25	1 12 2	Auroral light nearly all over the sky, brightest in N.N.W. Sky rapidly clouding over.			
— 8 29	— 12 6	Bright aurora (2) from N. to N.N.E., 3° alt. - -			
— 8 35	— 12 12	Bright aurora (1) visible between the clouds from 30° alt. in E.N.E. to zenith.			
— 8 45	— 12 22	Faint aurora (·7) visible between clouds from N. to E., 15° alt., and from E.S.E. to S.E., alt. 15° (·5). Faint arch from 40° alt. in E. through zenith to 30° alt. in S.W. (·5).			
— 8 55	— 12 32	Faint masses of aurora (·5) visible between clouds from 10° alt. in N. to 60° alt.			
— 9 6	— 12 43	Faint aurora (·7) visible between clouds in N. and E. from 15° alt. to 70° alt. Sky nearly overcast.			
— 9 10	— 12 47	Sky nearly covered with aurora visible between clouds, and two bright streaks (1) in N.N.W., alt. from 3° to 10°.			
— 9 15	— 12 52	Bright aurora (1) visible between clouds in N.N.W., 5° alt. and in S. and S.E. (·5).			
— 9 27	— 1 4	Bright aurora on N.N.W. horizon (1) apparently disappearing under clouds.			
— 9 40	— 1 17	Ditto. Sky overcast - - - -			
— 9 50	— 1 27	Faint patch (·5) on N.N.W. horizon - - -			
— 10 0	— 1 37	Ditto. Sky overcast, but light probably caused by aurora.			
— 10 5	— 1 42	Faint patch on N.N.W. horizon (·5) - - -			
— 10 25	— 2 2	„ (·5) on N.W. horizon. Sky dark - -			
— 11 55	— 3 32	Bank of aurora (1) from N.N.W., to E.N.E., alt. 5° to 15°, partly visible between clouds.			
P.M.					
— 12 5	— 3 42	Faint patches only visible between clouds - -			
A.M.	P.M.				
2nd 5 28	— 9 5	Arch from S.E. through zenith towards N.W., lower edge immediately passing Arcturus (1·5).			
— 6 28	— 10 5	Arch from E.S.E. to N.W., partly seen through clouds, lower edge 45° alt., upper edge through zenith; (3) in E.S.E., other parts (1·5).			
— 7 0	— 10 37	Aurora visible along the edge of clouds, from N.N.E. towards W.S.W., brightest in N.N.E. (2). Faint diffused arch (·7) from S.E. through Leo to W.N.W.			

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. April. h m. A.M.	1883. April. d. h. m. P.M.				
2nd 7 28	1 11 5	Arch (·7) from S.E. through Spica to W.N.W.; diffused masses of aurora from E.S.E. and N. to W.N.W., covering Cassiopeia.			
— 8 0	— 11 37 A.M.	Diffused arch (1) from S.E. through Leo to N.W. -			
— 8 28	2 12 5	Arch (1·5) from E.S.E to N.W., about 50° alt. in S. -			
— 9 23	— 1 0	Corona in zenith, half the sky covered with aurora, (3) in N.W., (1) elsewhere.			
— 10 28	— 2 5	Aurora visible through clouds in N. and N.N.W.; streak through zenith (1).			
— 11 28	— 3 5 P.M.	Aurora (·5) from N.N.W. to zenith. Streaks (1) on N.N.W. horizon.			
3rd 7 28	— 11 5 A.M.	Mass of aurora (1) visible between clouds in S.W., 45° alt. Sky overcast.			
— 8 28	3 12 5	Masses of aurora visible through clouds from E.S.E. to S., 50° alt. (Magnetic instruments much disturbed).			
— 9 28	— 1 5 P.M.	Faint streak from S. to S.W., 30° alt., visible between clouds.			
4th 4 19	— 7 56	Arch (1) from E.S.E. to N.N.W., 60° alt. Streak (·5) in zenith.			
— 4 28	— 8 5	Irregular arch (1) from E. to N.N.W., 45° alt., striated, and pulsating from E. to N.			
— 4 57	— 8 34	Mass of aurora (·5) from E. to E.S.E., 15° alt. - -			
— 4 58	— 8 35	- - - - - - - -	430	314	256
— 4 59	— 8 36	Arch from E. to N.N.W., 60° alt. (·5 to 1), brightest in E.			
— 5 0	— 8 37	- - - - - - - - -	411	312	238
— 5 28	— 9 5	Five irregular parallel arches and about 5° apart, from E. to E.S.E., the centre one brightest and passing through zenith to N.N.W. (·5 to 1).			
— 6 28	— 10 5	Mass of aurora (·5) in E.S.E. to 8° alt. Mass of aurora (1) in N.N.W. to 10° alt. Diffused arch (·5) from E.S.E. through zenith to N.N.W. Arch (·3) from S.E. to W., 30° alt. Sky nearly covered with fainter aurora.			
— 7 19	— 10 42	Bright, irregular, and diffused arch (2) with streamers in N.W. from E.S.E. and S.E. through zenith to N.W. -			
— 7 28	— 11 5	Diffused arch (1·5) from E.S.E. through zenith to N.W. Another irregular arch (1·5) from E.S.E. to N.N.W., 15° alt.			
— 7 57	— 11 34	Sky from 5° alt. to 40° alt., and from E.S.E. to W.N.W., covered with aurora (·7).			
— 8 23	— 12 0 A.M.	- - - - - - - -	398	302	—
— 8 28	4 12 5	Bright diffused arch (2·5) with prismatic vertical streamers, quivering and in rapid motion, from E.S.E. to W., 10° alt., drifting from centre towards zenith.	360	285	—
— 8 43	— 12 20	Corona (3) and prismatic. Bright prismatic folds of curtain-shaped aurora from E.S.E. to W. and from 5° alt. to 60° alt. (2·5). (Vertical force slightly affected.)	40	412	—
— 8 50	— 12 27	Aurora less bright (·5 to 2) and sky more or less covered with aurora, brightest about 5° alt. in N.N.W. and 10° alt. in S.E.	37	330	—
— 8 57	— 12 34	Sky covered with aurora (·7 to 1) streamers, and curtain folds.			
— 9 0	— 12 37	- - - - - - - - -	194	232	—
— 9 23	— 1 0	- - - - - - - - -	103	303	—
— 9 28	— 1 5	Faint auroral light (·3) all over sky. Bright band slightly prismatic (1·5) from E.S.E. to N., 2° alt.			
— 9 57	— 1 34	Faint irregular masses of aurora (·3 to ·7) from 3° to 5° alt. all round. Very faint light in zenith.			
— 10 28	— 2 5	Faint irregular arch (·3) from S.E. to W., alt. 7°. Masses of aurora on horizon from E. to N.N.E. (1).			
— 11 28	— 3 5	Arch (·7) from S.E. to W., 35° alt in S.; faint patches in N.W. and N.E.			

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. April. h. m.	1883. April. d. h. m.				
A.M.	P.M.				
5th 5 28	4 9 5	Faint wide diffused arch (·5) from E.S.E. through zenith to N.N W.			
— 6 19	— 9 56	Diffused and irregular arch (1) from E.S.E. through zenith to N.W.			
— 6 28	— 10 5	Wide irregular aurora from E.S.E. through zenith and to 10° alt., N.E. to N.N.W.(1 to 1·5), brightest in E.S.E., where curtain-shaped.			
— 7 28	— 11 5	Arch (1) from E.S.E. through Arcturus to N.W. - -			
	A.M.				
— 8 28	5 12 5	Masses of auroral light from S.E. to N.W. through zenith, about 50° wide (1).			
— 9 28	— 1 5	Masses of light from E.S.E. to W.N.W., sky covered to 25° from N. and S. horizons, brightest in W.N.W. (2), elsewhere (1).			
— 10 28	— 2 5	Light in shape of cirrus (?) clouds. Patches and streaks all over the sky (·7).			
— 11 28	— 3 5	Arch (·5) from N.W. to N.N.E., 20° alt. - -			
	P.M.				
6th 5 28	— 9 5	Diffused light N. of zenith (·7) - - - -			
— 6 28	— 10 5	Arch visible from 30° S.E. of zenith to about 20° N.W. of zenith (·7). Sky nearly overcast.			
— 7 23	— 11 0	Bright aurora (2) from E.S.E. to zenith, prismatic, and in rapid motion.	254	353	191
— 7 28	— 11 5	Sky nearly covered with faint aurora - - - -			
— 7 57	— 11 34	Faint streaks (·3) in zenith and on N. horizon - -			
— 7 58	— 11 35	- - - - - - - - -	372	312	502
	A.M.				
— 8 28	6 12 5	Sky, from E.S.E. to N.N.W. and up to zenith, is covered more or less with faint aurora (·3 to ·7), brightest in zenith.			
— 9 28	— 1 5	Irregular aurora (1) from N.N.W. through zenith to E.S.E., 10° wide.			
— 9 59	— 1 36	Streak in zenith (1). Faint aurora from E.S.E. to S.W., 10° to 20° alt.			
— 10 28	— 2 5	Aurora as before, except the streak in zenith, which is fainter (·3).			
	P.M.				
7th 7 28	— 11 5	Diffused arch (·7) from E.S.E. through zenith to N.N.W. Faint streak in N., 5° alt. (·5).			
	A.M.				
— 8 28	7 12 5	Bright curtain-shaped aurora (1·5) from E.S.E. to E.N.E. and zenith, extending in an arch from zenith to W.N.W.			
— 9 28	— 1 5	Bright, irregular, and diffused arch (1) from E.S.E. through zenith to N.W.			
— 10 28	— 2 5	Irregular aurora (·7) from 20° E.S.E. to 30° N.N.W., to 60° alt.			
	P.M.				
8th 6 28	— 10 5	Faint arch (·5) with streamers from E.S.E. to N., 25° alt., partly visible between clouds.			
— 7 28	— 11 5	Arch (·7) from E.S.E. to N.W., about 60° alt. - -			
	A.M.				
— 8 28	8 12 5	Arch (1) from E.S.E. to N.W., 50° alt., another arch from S.S.E. to W.N.W. through Leo (·5), and a few patches in N.W.			
— 9 28	— 1 5	Diffused masses of (1·5) light round zenith - -			
— 10 28	— 2 5	Faint masses of light. Patches and streaks nearly all over the sky.			
— 11 28	— 3 5	Aurora in zenith visible through the clouds - -			
	P.M.				
9th 7 28	— 11 5	Mass of aurora (·5) in E.S.E. to 10° alt. Streak from E.S.E. through zenith towards N.N.W. (1).			
	A.M.				
— 8 28	9 12 5	Irregular aurora (·5) from E.S.E. through zenith to N.N.W.			
— 9 28	— 1 5	Mass of aurora (1) in E.S.E., 10° to 15° alt. - -			

Göttingen Mean Time.	Local Mean Time.	——	H.F	D.	V.F.
1883. April. h. m.	1883. April. d. h. m.				
A.M.	P.M.				
10th 7 28	9 11 5	Faint patches visible between clouds from N. to E., 25° alt.			
11th 6 28	10 10 5	Diffused arch (·7) from E.S.E. to N.W. through zenith, extending from thence about 45° towards S.S.W.			
— 7 30	— 11 7	Irregular arch (1) from W.N.W. to E.S.E., 10° alt. Another arch from E.S.E. to W.N.W., 8° alt. Irregular mass of aurora from E.S.E. to W., alt. from 70° to 80° (1).			
	A.M.				
— 8 28	11 12 5	Arch (1) from E.S.E. through zenith to N.W.; irregular masses of aurora in S. and S.E. (·7).			
— 9 28	— 1 5	Diffused masses of aurora from E.S.E. to N.W. through zenith (1), and 60° wide.			
— 10 28	— 2 5	Band (1) from Arcturus to W.N.W., and arch (·7) from S.E. to W.N.W., 30° alt.			
— 11 28	— 3 5	Arch (1) from S. to S.W., 20° alt. Patches of aurora (1) on N.N.W. horizon.			
	P.M.				
12th 6 23	— 10 0	Band (1) from E.S.E. through zenith to N.W. - -			
— 7 20	— 10 57	Irregular striated aurora (1) from N.W. to E.S.E., 25° alt., with streamers to zenith.			
— 7 28	— 11 5	Ditto from N.W. to E., 15° to 25° alt. - -			
— 7 40	— 11 17	Corona in zenith (·8) - - - -			
— 7 57	— 11 34	Striated arch (1) from W. to E.S.E., 45° alt - -			
— 8 0	— 11 37	- - - - - - - - -	333 347 372	308 307 295	426 309 240
— 8 3	— 11 40	Curtain-shaped aurora (1) from W. to E.S.E., with faint streamers 45° to 90° alt.			
— 8 23	— 12 0	- - - - - - - - -	360	293	183
	A.M.				
— 8 28	12 12 5	Irregular diffused arch (·5) from N.W. to N.N.E., 50° alt. Streak (1) from E.S.E. through zenith.			
— 8 57	— 12 34	Irregular aurora (1) from N.N.W. to N., 8° to 25° alt. -			
— 9 28	— 1 5	Mass of aurora (·5) in N.W., 6° to 10° alt. Streak (1) in zenith.			
— 10 28	— 2 5	Faint arch (·3) from N.W. to N.N.E., 10° alt. - -			
13th 8 28	13 12 5	Bright mass of aurora (1) on E.S.E. horizon partly visible through clouds. Sky overcast.			
	P.M.				
14th 5 28	— 9 5	Very faint arch from E.S.E. to N., 15° alt. - -			
— 7 28	— 11 5	Arch (·7) from E.S.E. through zenith to N.W. - -			
	A.M.				
— 8 28	14 12 5	„ (·7) from S.E. to N.W., 70° alt. - - -			
15th 8 50	— 12 27	Faint arch from E.S.E. through zenith to N.N.W., partly visible through clouds. Sky overcast			
— 9 5	— 12 42	„ disappeared - - - - -			
	P.M.				
16th 6 28	15 10 5	Faint streak (·5) in N.N.W., 15° alt. - - -			
	A.M.				
— 8 28	16 12 5	Faint striated aurora (·3) from E.S.E. to zenith -			
— 10 28	— 2 5	Faint curtain-shaped aurora (·5) in S.E., from 5° to 10° alt. A few streamers in W., the same alt. as the moon (1).			
— 11 28	— 3 5	Band of aurora (1·5) from S.E. to W.N.W. through zenith, prismatic, and pulsating in zenith.			
	P.M.				
17th 6 23	— 10 0	Streamers (1) in S.E., 10° alt., and in W. (·7), 15° alt. -			
— 7 28	— 11 5	Diffused arch (·7) from S.E. through zenith to N.W. -			
	A.M.				
— 8 28	17 12 5	Faint band (·5) from S.E. through Arcturus to N.W. -			
— 9 28	— 1 5	Band (·7) from S.E. through Arcturus to N.W. Band from S.E. through Ursa Major to W.N.W. (·7).			
	P.M.				
18th 7 33	— 11 10	Three vertical streamers (1) in E.S.E., 10° to 30° alt. -			
	A.M.				
— 9 20	18 12 57	Curtain-shaped prismatic aurora from E.S.E. to W., alt. 25° to 45° (2).			
— 9 28	— 1 5	Irregular and diffused aurora from E.S.E. through zenith to N.W., about 15° wide (1).			
— 9 57	— 1 34	Irregular aurora (·8) from N.W. to zenith - -			

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. April. h. m.	1883. April. d. h. m.				
A.M.	A.M.				
18th 10 20	18 1 57	Irregular striated arch (1) from E.S.E. through zenith to N.N.W.			
— 11 28	— 2 5	Mass of aurora (1) in zenith. Streak in E.S.E., 45° alt. (1), and a few streamers in N.N.W., 30° alt., and in rapid motion (1·5).			
	P.M.				
19th 5 43	— 9 20	Streamers (1) in E.S.E., 25° alt. Streamers in S.W., 45° alt. (1), of a greenish glow and in rapid motion.	288	221	104
— 6 23	— 10 0	- - - - - - - - - -	254	234	O.S.
— 6 24	— 10 1	Striated arch (1) from E.N.E. to N.W., 45° alt. -	229	236	O.S.
— 6 28	— 10 5	Arch (1·5) from E.S.E. to N.N.W., 60° alt. Streak (1) in N.W., 5° alt., and patches (1) on N. horizon.			
— 6 57	— 10 34	Irregular faint aurora (·5) from E. to N.N.W. up to zenith. Patch (1) in N.W., 15° alt.			
— 7 27	— 11 4	Corona in zenith (1·5). Bright irregular aurora with slightly prismatic streamers from E.S.E. to W., alt. 70° (2).			
— 7 59	— 11 36	Bright irregular arch (1) from S.E. to W., 40° alt. -			
	A.M.				
— 8 28	19 12 5	Faint arch (·7) from 10° alt. in S.E. to W.N.W., 40° alt. Faint streaks 5° E.S.E. of zenith.			
— 9 22	— 12 59	The whole sky from S.E. to W.N.W. and zenith more or less covered with folds of curtain-shaped aurora from (·5 to 1·5), brightest at 45° alt.			
— 9 28	— 1 5	The above (1) - - - - - - -			
— 9 56	— 1 33	Sky nearly covered with faint auroral light - -			
— 10 28	— 2 5	Serpentine arch (1·5) with streamers from E.S.E. to N.N.W., 35° alt.			
	P.M.				
20th 4 55	— 8 32	Bright irregular aurora from E.S.E. horizon to 45° alt., and of a pink colour.			
— 4 58	— 8 35	- - - - - - - - - -	—53	490	82
	d. h. m. s.				
— 5 1	— 8 37 50	Irregular arch from E.S.E. to N.N.W. of a light pink colour (·7), alt. 3°.			
	d. h. m.				
— 5 2	— 8 39	- - - - - - - - - -	126	315	O.S.
— 5 19	— 8 56	Arch (·5 to 1) from E.S.E. to N., alt. 10°, brightest on E.S.E. horizon, and of a greenish colour.			
— 5 23	— 9 0	- - - - - - - - - -	247	322	443
— 5 28	— 9 5	Faint diffused arch (·3 to ·7) from E.S.E. through zenith to N.N.W., brightest from E.S.E. horizon to 25° alt. Bright irregular aurora (1) slightly prismatic from E.S.E. horizon towards N. 30° alt.			
— 5 57	— 9 34	Bright irregular masses (1·5) on E.S.E. horizon -			
— 6 28	— 10 5	Masses of aurora (·5) on E.S.E. horizon - -			
— 7 28	— 11 5	Irregular masses of aurora (1) from S.E. to 45° N.W. of zenith, extending from 10° alt. to the moon.			
	A.M.				
— 8 28	20 12 5	Irregular masses of aurora (1) from S.E. through zenith to N.W.			
— 9 28	— 1 5	Arch (1) from S.E. to N.W., just passing S. of Ursa Major.			
— 10 28	— 2 5	Faint streak (·5) through zenith - - -			
	P.M.				
25th 6 28	24 10 5	Mass of aurora (1) in S.W., 45° alt., visible between and through clouds.			
— 7 28	— 11 5	Faint mass of auroral light in N.N.W. - - -			
	A.M.				
— 8 28	25 12 5	Irregular arch (1·5) with vertical streamers, prismatic from S.E. to W.N.W., 45° alt.			
— 9 28	— 1 5	Masses of aurora (1) from W.N.W. to W.S.W., 10° alt.			
— 10 28	— 2 5	Irregular aurora (1) from S. to W., 20° alt.			
	P.M.		340	356	O.S.
— 5 23	— 9 0	- - - - - - - - - -	316	320	−100
			257	290	−50

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. April. h. m.	1883. April. d. h. m.				
	A.M.				
26th 5 34	25 9 11	Bright diffused arch (1) from E.S.E. through zenith to 20° of N.N.W. horizon. Bright curtain-shaped aurora from E.S.E. to E.N.E., from 5° to 40° alt., the whole of a pink colour. At this time there was enough daylight to see to read.	240	350	O.S.
— 5 38	— 9 15	Very faint - - - - -	160	366	O.S.
— 5 58	— 9 35	Very faint auroral light in zenith - - -	156	260	O.S.
— 6 0	— 9 37	- - - - - - - - -	207	226	−50
— 6 2	— 9 39	- - - - - - - - -	224	215	−100
— 6 3	— 9 40	„ disappeared.			
— 6 58	— 10 35	Faint diffused and irregular arch from E.S.E. through zenith to N.N.W. (·5).			
— 7 28	— 11 5	Diffused masses of auroral light in and around zenith. Arch from S.E. to W., 45° alt. in S. Diffused masses of light in E.N.E. and streamers in N.W. and N.E., 45° alt. (1).			
	A.M.				
— 8 28	26 12 5	Double arch (1) from S.E. through Spica to W.N.W. Arch (·7) from E.S.E. to N.W., 45° alt.			
— 9 28	— 1 5	Sky almost covered with patches and streamers (·7) -			
	P.M.				
27th 5 53	— 9 30	Arch (1) from S.E. to W., 45° alt. in S. - - -			
	— 10 0	Diffused arch (1) from E.S.E. through zenith to N.W., about 25° wide.			
— 7 20	— 10 57	Folds of curtain-shaped aurora (1) from W. to N.N.W., 5° to 45° alt. Faint diffused aurora (·5) from E.S.E. through zenith to N.N.W., about 5° wide. Faint arch (·3) from S. to W., 30° alt.			
— 7 28	— 11 5	Faint aurora (·3) in N.W. Arch from S. to W., very faint.			
— 7 57	— 11 34	Arch (·5) from N.N.W. to N.N.E., 10° alt. Vertical streak (·5) in N.N.E. from horizon to 15° alt.			
— 8 3	— 11 40	Arch as before. Streak (1), another arch from same points 25° alt. (·5).			
	A.M.				
— 8 28	27 12 5	Irregular aurora (1) from N.N.W. to E.S.E., 45° alt., striated from N.N.W. to N.N.E.			
— 9 28	— 1 5	Streamer (1) in E. from horizon to 10° alt. - -			
	P.M.				
29th 7 28	28 11 5	Aurora visible in zenith through clouds - - -			
	A.M.				
— 8 28	29 12 5	Aurora visible between the clouds about 6° N. of zenith -			
	P.M.				
30th 7 28	— 11 5	Irregular aurora (·8) from E.S.E. through zenith towards N.N.W., about 4° wide.			
	A.M.				
— 8 28	30 12 5	Irregular arch (·5) from E.S.E. to W.N.W., 55° alt. Streak (·5) parallel to the arch and 10° S. of zenith.			
May.	P.M.				
1st 6 0	— 9 37	Aurora from E.N.E. to zenith passing through ϵ, ζ, η, Ursæ Majoris (·3).			
— 6 3	— 9 40	„ „ and streamers in N.W. - -			
— 6 5	— 9 42	„ fainter - - - - -			
— 6 6	— 9 43	„ disappeared - - - - -			
h. m. s.					
— 6 12 20	— 9 49	Faint segment from E.N.E. to β Ursæ Minoris (·3) -			
— 6 13 20	— 9 50	Segment from E. of Arcturus towards Ursa Major (·3) -			
— 6 15 20	— 9 52	Brighter (·5) and extending towards N.W. - -			
— 6 17 0	— 9 54	Fainter and nearer zenith - - - -			
— 6 18 0	— 9 55	Fainter (·1) and through Ursa Major - - -			
— 6 19 0	— 9 56	Brighter (·5), a streamer in E.N.E. 30° to 50° alt. -			
— 6 20 20	— 9 57	Fainter (·3) and more diffused in E.N.E. - - -			
— 6 22 0	— 9 59	A streak (1) slightly striated in E.N.E., alt. 30° to zenith			
— 6 23 40	— 10 1	Irregular arch (·7) through Ursa Major and Capella, streamers in N.E.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. May. h. m. s. A.M.	1883. April. d. h. m. P.M.				
1st 6 24 40	30 10 2	Aurora in N.E. fainter			
— 6 25 40	— 10 3	Disappeared except irregular patch in N.W. (·4), alt. 45°			
— 6 28 0	— 10 5	Segment in E.N.E., alt. 30° (·3), streamers (·5), between Capella and α and β Geminorum.			
— 6 31 0	— 10 7	Arch from 10° alt. in E.N.E. to Polaris; faint patch as before in N.W.			
— 6 33 20	— 10 10	Arch (·6) now extending from 10° alt. in E.N.E. to Capella, passing halfway between Polaris and Ursa Major			
— 6 35 0	— 10 12	Disappeared except patch in E.N.E. (·4)			
— 6 36 0	— 10 13	Faint arch (·3) through zenith to E.N.E.			
— 6 36 40	— 10 14	Fainter and 5° farther to S.W.			
— 6 38 0	— 10 15	Aurora disappeared			
— 6 39 40	— 10 16	„ from Ursa Major to E. horizon			
— 6 40 40	— 10 17	Now extending to Capella (·6)			
— 6 42 30	— 10 19	Fainter and more diffused			
— 6 44 0	— 10 21	Narrow streak (·9) through ϵ, ζ, η, Ursæ Majoris. Faint light in S.W., 25° alt.			
— 6 45 20	— 10 22	Fainter, and light in S.W. disappeared			
— 6 47 0	— 10 24	Arch through Leo (·2)			
— 6 48 0	— 10 25	A good deal of diffused light S.W., S., and S.E. of zenith (·2), streamer (·2) in N.E.			
— 6 49 40	— 10 27	Faint streamers converging in Ursa Major (·2)			
— 6 50 40	— 10 27	Above streamers disappeared leaving nebulous light (·1)			
— 6 53 0	— 10 30	Streamer (1) in Ophiuchus. Nebulous arch (·5) thence through Ursa Minor towards Auriga. Patch in W.S.W., 30° alt. (·5).			
— 6 55 30	— 10 32	Arch slightly brighter, streamer disappeared			
— 6 56 40	— 10 33	Now through Ursa Major about 10° in breadth			
— 6 58 0	— 10 35	Arch now through Ursa Major and Gemini			
— 6 59 0	— 10 36	More diffused, extending to Arcturus. Diffused light in E.N.E.			
— 7 0 0	— 10 37	Disappeared. Segment of arch (1) just below β Geminorum.			
— 7 5 0	— 10 42	Diffused mass in E.S.E. to 10° alt., 5° wide			
h. m.					
— 7 10	— 10 47	Mass of aurora as before. Arch (1·5) from S.E. to S.W., 14° alt.			
— 7 15	— 10 52	Arch now (·5)			
— 7 20	— 10 57	„ as above, but interrupted in the centre			
— 7 30	— 11 7	Curtain-shaped striated aurora from E.S.E. to N.N.W. up to zenith, in rapid motion (2).			
— 7 32	— 11 9	Corona in zenith (2·5), prismatic			
— 7 35	— 11 12	Sky more or less covered with aurora (1 to 2·5), brightest in N.N.W.			
— 7 45	— 11 22	Arch (1·5) from N.N.E. to S.W., with streamers pulsating from N.N.E. to S.W. and faint streamers in zenith.			
— 7 50	— 11 27	Diffused aurora from S.W. horizon to zenith (1). Faint aurora from zenith to N.N.E.			
— 7 55	— 11 32	Aurora very faint			
— 8 0	— 11 37	Disappeared except faint patches from S. to W.S.W., from 5° to 10° alt.			
— 8 10	— 21 47	Ditto			
— 8 15	— 11 52	Streak (·5) from E.S.E. to zenith			
— 8 20	— 11 57	„ disappeared			
	May. A.M.				
— 8 31	1st 12 8	Very faint streamers in N.N.W., 45° alt.			
— 8 41	— 12 18	Corona in zenith (1). Streamers from 70° alt. in N.N.W. to 50° alt. in E.S.E., passing 15° E.N.E. of zenith (·7).			
— 8 45	— 12 22	Corona disappeared except a few streamers in N., 70° alt. (·5).			
— 8 56	— 12 33	Faint masses in zenith (·3)			
— 9 5	— 12 42	Diffused arch (·7) from E.S.E. through zenith to N.N.W., disappearing under clouds at extremities.			
— 9 10	— 12 47	Above arch irregular (1) and drifting towards N.E.			
— 9 15	— 12 52	„ through zenith, regular, and (1·5)			

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. May. h. m.	1883. May. d. h. m.				
A.M.	A.M.				
1st 9 26	1 1 3	Arch from N.N.W. to E.S.E., 70° alt., partly visible through clouds (1).			
— 9 30	— 1 7	,, very faint - - - - - -			
— 9 35	— 1 12	,, disappeared except a faint streak in N.N.E., 75° alt. (·5).			
— 9 41	— 1 18	Faint masses (·7) in N.N.W., 20° alt. Faint band from S.E. to S.S.W., 10° alt. (·5).			
— 9 46	— 1 23	,, disappeared - - - - - -			
P.M.	P.M.				
2nd 7 28	— 11 5	Arch (·7) from S.E. to W.N.W., 50° alt., from S. -			
A.M.	A.M.				
3rd 10 28	3 2 5	Streak (2) in N.W. from horizon to 25° alt. - -			
4th 10 28	4 2 5	Bright irregular, diffused arch (1) from E.S.E. to W., of a light red colour, 60° alt.			
P.M.	P.M.				
5th 7 28	— 11 5	Faint arch (·5) from S.E. to W., 45° alt. from S. - -			
A.M.	A.M.				
— 8 28	5 12 5	Faint diffused arch from E.S.E. to W.N.W., the N. edge through Ursa Major (·7).			
P.M.	P.M.				
7th 7 2	6 10 39	Diffused and irregular arch from S.S.W. to N., 60° alt. (1)			
— 7 28	— 11 5	Faint streak in zenith - - - - - -			
9th 8 22	8 11 59	Serpentine auroral light from E. horizon to 45° alt. (2) -			
A.M.	A.M.				
— 8 28	9 12 5	Arch (1·5) from E. to N.N.W., 25° alt. Streak (2) in N.W., 30° alt. Sky cloudy overhead.			
— 8 57	9 12 34	Aurora disappeared - - - - - -			
11th 8 28	11 12 5	Arch (1·5) from E.S.E. to N.W., about 60° alt. Diffused masses of light in zenith and N.W. and S.E. of zenith (1).			
P.M.	P.M.				
12th 7 20	— 10 57	Two arches (1) from E.S.E., one through zenith to W., the other 15° S. of zenith to W.S.W.			
— 7 21	— 10 58	- - - - - - - - -	351	317	9
— 7 23	— 11 0	,, ,, but fainter - - - -	352	312	83
— 7 25	— 11 2	- - - - - - - - -	360	313	111
— 7 28	— 11 5	Arch (1·5) from E.S.E. through zenith - - -			
— 7 37	— 11 14	Mass of streamers in E.N.E. (2), prismatic and in rapid motion.	—	368	—
— 7 57	— 11 34	Faint aurora from E.S.E. to zenith - - -			
— 8 0	— 11 37	- - - - - - - - -	330	323	398
— 8 1	— 11 38	Streamers (2) from E.S.E. through zenith to N.N.W. -			
— 8 2	— 11 39	- - - - - - - - -	310	314	412
— 8 6	— 11 41	,, disappeared except faint streak in E.S.E. -			
A.M.	A.M.				
— 8 28	12 12 5	Arch (1) from E.S.E. to N.N.W., 50° alt., and a few streamers in zenith (1).			
P.M.	P.M.				
13th 7 20	— 10 57	Faint streak (·5) in E.S.E., from 15° to 45° alt. - -			
— 7 28	— 11 5	Bright irregular aurora (1) from 15° alt. in E.S.E. to 5° of zenith.			
A.M.	A.M.				
— 8 28	13 12 5	Bright streamers (1·5) from N.N.W. to N.N.E., 15° alt.			
h. m. s.	P.M.				
15th 7 42 0	14 11 19	Faint arch in S.W. (·3), 20° alt. - - -			
— 7 43 30	— 11 20	Disappeared - - - - - -			
— 7 47 0	— 11 24	Segment of arch from E.S.E. to 60° alt. (·8) - -			
— 7 49 20	— 11 26	Faint streamers in S.E. (·7) - - - -			
— 7 50 40	— 11 27	Slightly brighter - - - - - -			
— 7 51 40	— 11 28	Serpentine, and light more concentrated (1) - -			
— 7 53 0	— 11 30	Extending to alt. 45° and (·9) - - -			
— 7 54 30	— 11 31	Extending to above Arcturus and (·5) - - -			
— 7 55 40	— 11 32	Disappeared except nebulous light in S.E. (·2) - -			
— 7 56 30	— 11 33	Reappeared as at 53m., with patch (1), alt. 5° - -			
— 7 58 0	— 11 35	Patch alone visible and (·7) - - - -			
— 7 59 0	— 11 36	As at 55m. 40s. - - - - -			
— 8 2 0	— 11 39	,, ,, and (·6) - - - - -			
— 8 5 0	— 11 42	Arch from S.E. to W.N.W., 10° S. of zenith (1) -			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. May. h. m. A.M.	1883. May. d. h. m. P.M.				
15th 8 15	14 11 52	Above arch disappeared. Patch in S.E., 25° alt. (1) -			
— 8 20	— 11 57	Arch from S.E. to W.N.W., upper edge through Ursa Major, lower passing the Moon (1·5). A.M.			
— 8 25	15 12 2	Arch partly disappeared, passing halfway between zenith and Moon (1).			
— 8 30	— 12 7	Arch from E.S.E. passing Ursa Major to N.W., where diffused (1·5).			
— 8 36	— 12 13	Diffused prismatic arch (2), with streamers in rapid motion from E.S.E. to N.W.			
— 8 41	— 12 18	,, disappeared except streak (1) in N.W. from horizon to 20° alt.			
— 8 45	— 12 22	Streak in N.W. disappeared. Faint streak in zenith -			
— 8 50	— 12 27	,, disappeared - - - - -			
— 9 0	— 12 37	Irregular aurora (2) and prismatic from E.S.E. to E., 5° to 15° alt.			
— 9 5	— 12 42	Streak in N.W. disappeared - - - -			
16th 9 28	16 1 5	Faint irregular arch (·5) from E.S.E. through zenith to within 30° from W. horizon.			
21st 8 28	21 12 5	Bright auroral light (2) in E., 15° alt. - - -			
— 8 53	— 12 30	Streak (2) in N.W., 30° alt. - - - -			
July	July	No aurora observed henceforth owing to the brightness of the twilight, until July 14.			
14th 8 23	14 12 0	- - - - - - - - -	407	333	1153
— 8 34	— 12 11	Bright streak (3) from E.N.E. to zenith - -			
— 8 35	— 12 12	- - - - - - - - -	366	349	1017
— 8 37	— 12 14	- - - - - - - - -	370	342	1082
— 8 38	— 12 15	Disappeared - - - - - -			
		P.M.			
15th 8 16	— 11 53	Faint streak (·5) from W.N.W. from alt. 60° to 5° from zenith, drifting towards S.E., and becoming very faint. A.M.			
— 8 44	15 12 21	Aurora from about 20° alt. in E.S.E. towards S.E., and curved towards zenith (1).			
— 8 46	— 12 23	,, disappeared - - - - -			
— 8 56	— 12 33	Streaks at short intervals from E.S.E. horizon to 20° towards zenith, appearing about (1), and immediately becoming very faint.			
— 8 59	— 12 36	,, disappeared - - - - -			
		P.M.			
17th 7 56	16 11 33	Irregular aurora (2) from E.S.E. through zenith, moving towards N.W.			
— 8 1	— 11 38	Diffused irregular arch (1·5) from E.S.E. to N.N.W., 60° alt. A.M.			
18th 8 48	18 12 25	,, arch (2) with streamers from E.S.E. through zenith to W.N.W., pink in colour.			
— 8 53	— 12 30	,, disappeared - - - -			
		P.M.			
19th 7 30	— 11 7	Streak of aurora (1·5) from 40° to 60° alt. in E.S.E. -			
— 7 53	— 11 30	,, disappeared - - - - -			
23rd 7 28	22 11 5	Auroral streak (2) in E.S.E., 40° alt. - - -			
24th 7 20	23 10 57	No aurora - - - - - -			
— 7 23	— 11 0	- - - - - - - -	408	307	1140
— 7 33	— 11 10	Bright streamers in W.S.W., 45° alt., prismatic (3), and rapidly drifting towards S., and becoming fainter.	230	336	—
— 7 37	— 11 14	Streamers in S.E. (1·5), 50° alt., extending towards S. -	270	298	—
— 7 39	— 11 16	- - - - - - - - -	—	—	1000
	d. h. m. s.				
— 7 59	— 11 36 30	Bright streak (1·5) in N.N.W. from 20° alt. to zenith -			
	d. h. m.				
— 8 0	— 11 37	- - - - - - - -	323	345	1039
		A.M.			
26th 8 23	26 12 0	- - - - - - - -	424	336	1359
— 8 30	— 12 7	Irregular arch (1) from S.E. to N.W., 45° alt. (Magnetic instruments steady.)			
— 8 43	— 12 20	Arch (2) coloured pink in zenith, from E.S.E. through zenith, and moving towards N.W.	405	361	1198

Göttingen Mean Time.	Local Mean Time.	——	H.F	D.	V.F.
1883. July. h. m.	1883. July. d. h. m.				
A.M.	P.M.				
29th 7 23	28 11 0	- - - - - - - - - -	452	333	1050
— 7 29	— 11 5	Aurora (1·5) from E.S.E., to E.N.E., 5° to 15° alt., highest in E.N.E.	449	340	990
	A.M.				
— 8 26	29 12 3	Mass of aurora (1) just above horizon in E.S.E. - -			
— 9 23	— 1 0	- - - - - - - - - -	412	325	1244
— 9 26	— 1 3	Irregular arch (1·5) from N.W. to S.E., 40° alt. -			
— 9 32	— 1 9	,, ,, but 60° alt. -			
— 9 33	— 1 10	- - - - - - - - - -	396	312	1360
— 9 59	— 1 36	No aurora visible - - - - - -	358	306	1265
— 10 17	— 1 40	Ditto - - - - - -	360	315	1270
	d. h. m. s.				
	P.M.				
30th 7 0	— 10 37 18	Ditto - - - - - - -	409	292	1013
— 7 20	— 10 57 45	Bright irregular aurora (2) from W.S.W. to S.E., 7° alt.			
	d. h. m.				
— 7 23	— 11 0	- - - - - - - - - -	370	294	1167
— 7 28	— 11 5	Bright masses of aurora (1·5) in S.E., 5° alt. Faint streak (·7) in E., 45° alt.			
— 7 33	— 11 10	Aurora (2), alt. 15° S.W. to S.E., prismatic and in rapid motion. Streamers appearing and disappearing in different parts of the sky.	260 to	—	—
— 7 46	— 11 23	Corona (1) in zenith followed by rapid fall of bifilar, the aurora becoming fainter meanwhile. Streamers, &c. in other parts of the sky. Auroral light in S.S.W.	216		
	d. h. m. s.				
— 8 1	— 11 38 30	Bright patch (1) in N., alt. 15° - - - -			
	d. h. m.				
— 8 2	— 11 39	- - - - - - - - - -	286	—	—
	A.M.				
30th 8 28	30 12 5	Streak (1) in N.N.W., 20° alt. - - -			
	d. h. m. s.				
— 8 57	— 12 34 18	Streamer (1) in S.E., 15° alt. - - - -			
	d. h. m.				
— 9 28	— 1 5	Diffused arch (·7) from 50° alt. in N.W. through zenith to 5° towards E.S.E.			
31st 8 28	31 12 5	Arch (1·5) from E.S.E. through zenith to N.W. -			
	— 12 37	Diffused auroral light in zenith (1) - - -			
August	August.				
	P.M.				
4th 7 43	3 11 20	Aurora (1) from E.S.E. to S., 40° alt. (Thunder storm)			
	d. h. m. s.				
— 7 59	— 11 36 30	Irregular arch (1·5) from E.S.E. to W.N.W., 60° alt. -	372	355	1174
— 8 1	— 11 38 30	,, (1) from E.S.E. through zenith to N.W., drifting towards N. (Much lightning.)	362	363	1082
— 8 20	— 11 57 30	Aurora (·5) from E. to N.N.W., 80° alt. - -			
	d. h. m.				
	A.M.				
— 8 26	4 12 3	,, disappeared - - - -			
	d. h. m. s.				
— 8 59	— 12 36 30	Faint aurora (·5) from S.E. to W.N.W., 75° alt. -			
	d. h. m.				
	P.M.				
5th 7 26	— 11 3	Irregular and diffused aurora (1·5) from E.S.E. to zenith. (Magnetic instruments not disturbed.)			
	A.M.				
— 9 20	5 12 57	Faint aurora in N.N.W. to 50° alt., striated and (·7). Faint light (·3) in zenith, streamers in N.N.E., 45° alt. (1).			
— 9 26	— 1 3	Bright arch of vertical streamers from N.N.W. to E., drifting towards E.S.E., 30° alt. (2).			
— 10 20	— 1 57	Streak (·7) in N.N.W., 25° alt. - - -			
— 10 21	1 58	- - - - - - - - - -	396	342	1335
— 10 23	2 0	- - - - - - - - - -	406	337	1319
	d. h. m. s.				
— 10 24	— 2 1 30	Bright streak (1·5) in zenith, disappearing immediately -			
	2 2 0	- - - - - - - - - -	402	338	1326

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. August. h. m. A.M.	1883. August. d. h. m. P.M.				
7th 6 24	6 10 1	Arch (2) from E. horizon to zenith. (Instruments disturbed.)			
— 6 28	— 10 5	,, very faint (·5) - - - - -			
— 7 2	— 10 39	Auroral streak (2) in W.N.W., 30° alt. - - -			
— 7 6	— 10 41	Patch (1·5) in E.S.E., 25° alt. Streak as before. Sky cloudy.			
— 7 20	— 10 57	Streamers (1) in S.E., 45° alt. - - - -			
	d. h. m. s.				
— 7 22	— 10 59 30	Irregular aurora from N. to W., 50° alt. (1·5). - -			
	d. h. m.		330	342	400
— 7 23	— 11 0	- - - - - - - - -	334	319	444
— 7 27	— 11 4	A few streamers in S.E. as before at 10·57 - -	281	328	500
	d. h. m. s.				
— 7 57	— 11 34 30	Streamers (1) from E. to E.S.E., from 10° to 25° alt. -			
— 8 1	— 11 38 30	Aurora (·5) from E.S.E. to zenith - - -			
	d. h. m.				
8th 6 20	7 9 57	Streamers (1) in E.S.E. moving S., 25° alt. - -			
— 6 21	— 9 58	- - - - - -	403	339	1361
	d. h. m. s.				
— 6 22	— 9 59 30	Streamers (1) in 40° alt. - - - -			
— 6 23	— 10 0 0	- - - - - - - - -	390	348	1298
— 6 24	— 10 1 30	Irregular striated arch (2) from E.S.E. to N.W., 75° alt., pulsating towards N.W., and a patch (2) in E.S.E., 30° alt.			
	d. h. m.				
— 6 25	— 10 2	- - - - - - - - -	383	339	1291
— 6 26	— 10 3	Above arch through zenith - - - -			
— 7 20	— 10 57	Irregular arch (1) from E.S.E. to W., 20° alt. - -			
— 7 27	— 11 4	,, (·7) - - - - -			
— 8 18	— 11 55	Bright, broad arch (1 to 2·5) from E. to W. through zenith, with prismatic streamers in E., where brightest.			
	d. h. m. s.				
— 8 20	— 11 57 50	,, disappeared except faint patch (·3) in E., 60° alt.			
	d. h. m. A.M.				
— 8 26	8 12 3 P.M.	Bright masses (1) in S.S.W., 25° alt. - - -			
9th 6 53	— 10 30	Arch (2) with vertical streamers in E., from E. horizon to zenith.	390	360	—
— 7 24	— 11 1	Irregular curved band (2) from E.N.E. through Cassiopeia			
11th 6 21	10 9 58	Bright streamers (2) slightly prismatic in E., about 10° alt., drifting towards N.E.	310	381	1195
— 6 25	— 10 0	,, disappeared. Patch (·5) in E., 5° alt. -	337	366	1172
— 6 25	— 10 2	Bright irregular aurora (1·5) with streamers from E.N.E. to zenith, slightly prismatic and quivering, drifting towards N.	346	375	1095
	d. h. m. s.				
— 6 59	— 10 36 30	Streak (1) in zenith - - - -			
	d. h. m.				
— 7 20	— 10 57	Bright masses of aurora (1·5) from S. to S.E., 10° alt. Bright streak (1) in E.S.E., 70° alt.			
— 7 21	— 10 58	- - - - - - - - -	370	330	1244
— 7 23	— 11 0	- - - - - - - - -	373	328	1284
— 7 25	— 11 2	- - - - - - - - -	352	322	1435
	d. h. m. s.				
— 7 25	— 11 2 30	Arch (1) from W. to S., 40° alt., becoming rapidly brighter and moving to S.E., where prismatic.			
	d. h. m.				1300
— 7 27	— 11 4	Corona 5° E.S.E. of zenith - - - -	220	380	to 1500
	d. h. m. s.				
— 7 58	— 11 35 45 A.M.	Streak (·7) in N.N.W., 5° to 20° alt. - - -			
	d. h. m.				
— 8 27	11 12 4 P.M.	Faint streamers (·5) in N.N.E., 7° alt. - - -			
12th 7 29	— 11 6	Diffused auroral light (·3) in a great portion of the sky.			

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. August. h. m. A.M.	1883. August. d. h. m. A.M.				
12th 9 24	12 1 1	Arch (·5) from E.S.E. through zenith - - -			
13th 8 29	13 12 6	Faint aurora (·3) from E.S.E. to E., 15° alt. - - -			
— 9 26	— 1 3	Faint streak (·2) in E.S.E., from 5° to 10° alt - -			
	d. h. m. s.				
— 10 20	— 1 57 20	„ (·3) in N.W. 50° alt. - - - -			
	d. h. m.				
— 10 21	— 1 58	- - - - - - - - -	402	340	1155
— 10 23	— 2 0	- - - - - - - - -	397	344	1137
— 10 24	— 2 1	„ (·5) „ from 50° to 80° alt. - - -			
— 10 25	— 2 2	- - - - - - - - -	396	348	1190
— 10 26	— 2 3	Aurora from N.W. through zenith to E.S.E. (1) -			
— 10 35	— 2 12	Irregular striated arch (1·5) from E.N.E. through zenith, moving towards W.	386	355	1127
	P.M.				
14th 6 26	— 10 3	Faint arch (·3) from E.S.E. through zenith to N.W. -			
— 7 20	— 10 57	Faint arch (·5) from S.E. to N.W., disappearing under clouds, alt. 60°.			
— 7 26	— 11 3	„ disappeared - - - - - -			
	A.M.				
— 9 47	14 1 34	Faint diffused light (·5) in zenith - - -			
— 10 1	— 1 38	Faint arch (·7) from N.W. to zenith - - -			
— 10 27	— 2 4	Very faint irregular aurora, from E.S.E. horizon to 35° alt.			
	P.M.				
16th 7 28	15 11 5	Faint streak (·5) in E., from 35° to 40° alt. - -			
	d. h. m. s.				
— 8 20	— 11 57 30	Irregular aurora (·5) from E.S.E. through zenith to N.N.W., and several faint streaks in N.E., from 25° to 45° alt.			
	d. h. m.				
	A.M.				
— 8 26	16 12 3	„ disappeared, except a few streamers in E.S.E., 10° to 15° alt. (1).			
— 9 26	— 1 3	Faint streak (·3) in N.N.W., from 30° to 55° alt. - -			
	P.M.				
18th 7 24	17 11 1	Diffused arch (1·5) from E.S.E. through Cassiopeia to N.W.			
	d. h. m. s.				
— 7 25	— 11 2 30	Upper edge of arch through zenith - - - - -			
	d. h. m.				
	A.M.				
— 8 28	18 12 5	Arch (1) from S.E. to N.W., passing halfway between the Moon and zenith.			
— 9 21	— 12 58	- - - - - - - - -	397	323	1159
— 9 23	— 1 0	- - - - - - - - -	378	358	1265
— 9 24	— 1 1	Corona in zenith, streamers in N.W., and diffused masses of light (2) in S.E.			
— 9 25	— 1 2	- - - - - - - - -	372	339	1374
		(Magnetometers disturbed at the 2nd and 3rd readings.)			
— 10 28	— 2 5	Arch (1) from N.E. to N.W., 30° alt. (No aurora during the readings.)			
	P.M.				
19th 6 26	— 10 3	Arch (1) visible through clouds in zenith - - -			
— 7 33	— 11 10	Aurora (1) from W. to S., 45° alt. - - - -			
	A.M.				
— 8 26	19 12 3	Faint streamers (·5) in E.S.E., from 5° to 15° alt. -			
	P.M.				
	d. h. m. s.				
20th 7 20	— 10 57 30	Bright irregular aurora with prismatic streamers (2) from S.E. to S., from 25° to 40° alt.			
— 7 22	— 10 59 30	„ fainter (1), and from S. to S.W. -			
— 7 24	— 11 1 15	„ from 50° alt. in S.W. through zenith, prismatic and (2·5).			
— 7 57	— 11 34 30	Diffused light (1) in zenith. Bright slightly prismatic streamers (1·5) in N.N.E., 20° alt. Bright irregular aurora (1) in N.W., 10° alt.			

Göttingen Mean Time.	Local Mean Time.	———	H.F.	D.	V.F.
1883. August. h. m.	1883. August. d. h. m.				
A.M.	P.M.				
20th 7 58	19 11 35	- - - - - - - - -	302	374	899
— 8 0	— 11 37	- - - - - - - - -	250	318	984
— 8 1	— 11 38	Streamers disappeared, the rest very faint - - -			
— 8 2	— 11 39	- - - - - - - - -	253	318	1060
— 8 20	— 11 57	Faint streak (·5) in W., 70° alt., and in zenith - -			
	A.M.				
— 8 26	20 12 3	Faint masses (·7) in S.W., visible between clouds, 60° alt.			
	d. h. m. s.				
	P.M.				
21st 6 19	— 9 56 30	Faint aurora (·7) from E. to N.E., 20° alt. - - -			
	d. h. m.				
— 6 27	— 10 4	Arch (·5 to 1) from E.S.E. to N., 10° alt., irregular and brightest in E.S.E.			
— 7 28	— 11 5	Arch (1) from E.N.E. to N.W., 45° alt. -			
	A.M.				
— 8 24	21 12 1	Diffused arch (1) from E.S.E. through zenith to N.W. -			
— 9 24	— 1 1	Diffused mass of light (1) from 30° alt. S.S.E. through zenith towards N.W.			
	P.M.				
23rd 6 21	22 9 58	Striated arch (1) from S.E. to N.W., 45° alt. - -	403	333	1101
— 6 23	— 10 0	„ pulsating and (1·5). Steamers in E.S.E., from 5° to 15° alt. (2), and slightly prismatic.	393	332	1099
— 6 25	— 10 2	- - - - - - - - -	385	337	1135
	d. h. m. s.				
— 6 30	— 10 7 28	Bright aurora, (2·5) striated and prismatic, from E.S.E. through zenith to N.W., and drifting in all directions -	260	360	400
	d. h. m.				
— 7 20	— 10 57	Bright patch (1) in N., 5° alt. - - - - -			
— 7 27	— 11 4	Arch (1) with streamers from E.S.E. to N.N.W., 5° alt. Faint masses (·3) in zenith.			
— 8 20	— 11 57	Faint streak (·5) in N.N.W., 10° alt. - - -			
	A.M.				
— 8 26	23 12 3	Irregular aurora (1) from N. to N.E. 15° alt. - -			
— 9 27	— 1 4	Faint diffused arch (·7) from E.S.E. through zenith to N.N.W.			
	P.M.				
24th 5 20	— 8 59	No aurora - - - - - -			
— 5 26	— 9 3	Aurora (1) from E.S.E. to zenith - - - - -			
— 6 20	— 9 57	Diffused, striated arch (1) from E.S.E. through zenith to N.N.W. Another lower arch (·5) from E.S.E. to N., 20° alt., irregular in E.S.E.			
— 6 26	— 10 3	Ditto - - - - - - -			
— 7 24	— 11 1	Irregular arch (1·5) from S.E. through zenith to N.W. -			
	A.M.				
— 8 26	24 12 3	Serpentine arch (2) from E. through zenith to W.N.W. -			
— 9 24	— 1 1	Diffused masses of light (1·5) from the Moon through zenith to N.W.			
— 10 28	— 2 5	Faint masses (·5) in and round zenith - - -			
	P.M.				
25th 7 22	— 10 59 to	} Aurora more or less all over the sky, visible through clouds			
— 7 26	— 11 3		359	345	1103
— 8 0	— 11 37	Ditto - - - - - - - - -	330	291	1277
	A.M.				
— 9 26	25 1 3	Auroral light in zenith, visible between clouds - -			
	P.M.				
26th 7 20	— 10 57	Arch (1) from E. to N.N.W., 15° alt. - - - -			
— 7 27	— 11 4	„ irregular, 20° alt. Another arch from E.S.E. through zenith to 25° alt. in N.N.W. (·7).			
— 8 20	— 11 57	Bright, irregular, diffused arch (1·5) from E.S.E. to N.N.W., 35° alt., shooting up in a V shape from N.N.W. towards zenith.			
— 8 21	— 11 58	- - - - - - - - -	405	340	962

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. August. h. m.	1883. August. d. h. m. s.				
A.M.	P.M.				
26th 8 22	25 11 59 30	The whole sky from horizon to zenith, E.S.E. to N.N.W., more or less covered with curtain-shaped aurora from (1 to 2), brightest from E.S.E. to E.N.E., where slightly prismatic, to alt. 10.°			
	d. h. m.				
— 8 23	— 12 0	- - - - - - - - -	384	340	885
	A.M.				
— 8 25	26 12 2	- - - - - - - - - - - -	382	334	921
— 8 28	— 12 5	Corona in zenith (1) - - - - -			
	d. h. m. s.				
— 9 20	—12 57 30	Serpentine arch (1·5) from E.S.E. to N.N.W., 45° alt. -			
	d. h. m.				
— 9 27	— 1 4	Above arch from E. to N.N.W. and less bright except in N.N.W. Arch (·7) from E.S.E. to W., 40° alt.			
— 10 20	— 1 57	Arch (1 to 1·5) from E. to N.N.W., 30° alt., brightest in N.N.W.			
— 10 27	— 2 4	,, very faint - - - - - - - - -			
— 11 24	— 3 1	Faint streaks (·5) through zenith - - -			
	P.M.				
27th 6 20	— 9 57	Aurora (1) from E. to E.N.E., 10° alt. - - -			
— 6 27	— 10 4	Faint arch (·7) from E.S.E. to N., alt. 15° - - -			
— 7 26	— 11 3	Patch on E. horizon, and masses of light along N. horizon (2) to about 15° alt.			
	A.M.				
— 8 24	27 12 1	Arch (1) from S.E. to N.W. through zenith. Arch from N.N.W. to E., 45° alt., (3) in N.N.W. horizon, elsewhere about (1·5).			
— 9 24	— 1 1	Arch (·1) from E.S.E. through zenith, streamers 6° N.E. of zenith and from N.N.W. horizon to 45° alt. (2).			
	P.M.				
	d. h. m. s.				
28th 7 20	— 10 57 30	Irregular arch (1 to 1·5) from E.S.E. through zenith to N.N.W., brightest in E.S.E.			
	d. h. m				
— 7 26	— 11 3	Ditto (1) - - - - - - -			
	A.M.				
— 8 26	28 12 3	Arch (1) from E.S.E. to N.W., 45° alt. Irregular diffused mass (1) from E. to zenith.			
	d. h. m. s.				
— 9 24	— 1 1 30	Arch (1) from E.S.E. to N.N.W., 30° alt. Mass of aurora (·5) in zenith. Faint streamers from E. to N.W., from 20° to 50° alt.			
— 10 23	— 2 0 3	Streak (1·5) in N.N.W., from 10° to 30° alt. - -			
	d. h. m.				
— 10 26	— 2 3	,, faint (·5), and from 10° to 20° alt. - -			
	P.M.				
29th 6 27	— 10 4	Faint streak (·5) in E.S.E., from 10° to 30° alt. -			
— 7 20	— 10 57	Arch (·5) from E.S.E. to W.N.W., 45° alt. Bright irregular aurora (2) from E.S.E. to zenith, with slightly prismatic streamers.			
— 7 27	— 11 4	Arch as before. Folds of curtain-shaped aurora (1·5) from E.S.E. to zenith.			
— 8 20	— 11 57	Arch (·7) from E.S.E. to W.N.W., striated and 70° alt. in S.			
	A.M.				
— 8 27	29 12 4	Ditto - - - - - - - -			
— 9 20	— 12 57	Faint aurora (·5) from E.S.E. to 60° alt. Faint masses (·5) in W.N.W.			
— 9 27	— 1 4	Arch (1) from E.S.E. through zenith to W.N.W., striated in E.S.E., and partly visible between clouds in zenith -			
	P.M.				
30th 5 27	— 9 4	Faint arch (·5) from E.S.E. through zenith to W.N.W. -			
— 6 20	— 9 57	Arch (·5 to 1) from E.S.E. to W.N.W., 45° alt., disappearing under clouds.			
— 6 27	— 10 4	Arch as before. Irregular aurora from E.S.E. to zenith, striated and diffused (1·5).			
— 7 28	— 11 5	Diffused mass of light in E. and streamers (2) also visible through clouds about 10° S. of zenith to 45° N.W. (1·5).			
31st 7 26	30 11 3	Mass of aurora (·5) from E.S.E. to E., 20° alt. - -			

Göttingen Mean Time.	Local Mean Time.	——	H.F.	D.	V.F.
1883. August. h. m. A.M.	1883. August. d. h. m. A.M.				
31st 8 26	31 12 3	Irregular arch (·5) from E.S.E. to N.W., 80° alt. -			
— 9 26	— 1 3	Irregular aurora (1) from E.S.E. through zenith to N.N.W., about 5° wide in zenith.			
— 10 26	— 2 3	Faint streak (·3) in zenith - - - -			
September.	P.M.				
1st 5 27	— 9 4	Streak (·7) in E.S.E., 10° alt. - - - -			
— 6 27	— 10 4	Bright aurora (1) on horizon from E.S.E. to S.E. Masses visible in zenith between clouds (·5).			
— 7 20	— 10 57	Bright aurora (1·5) on horizon from E. to E.S.E. Arch (1) from S.E. to W., 30° alt., partly visible between clouds.			
— 7 27	— 11 4	Aurora from E. to E.S.E. as before. Masses visible between clouds in S.W., 30° alt.			

NOTE.

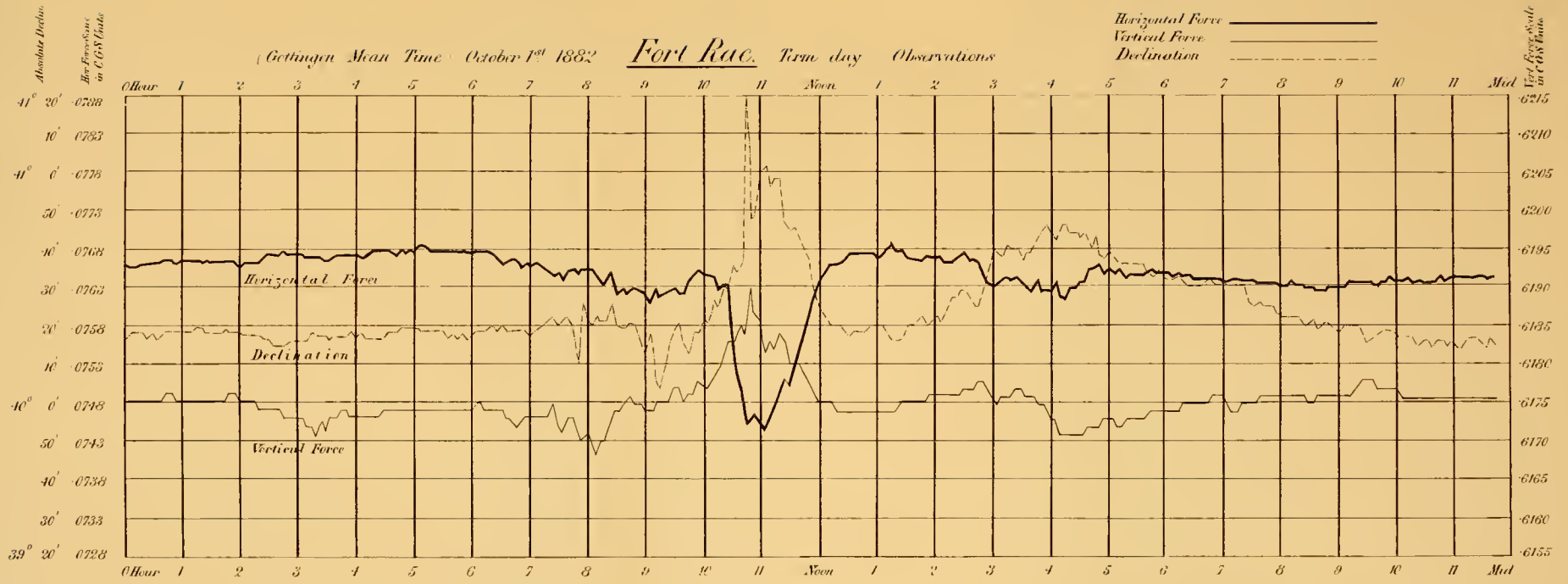
The readings of the magnetic instruments where given here, are in scale divisions, the values of one scale division in absolute measure (C.G.S. units) being :—

H.F. ·000019 D. 1′·0 V.F. ·00000574,

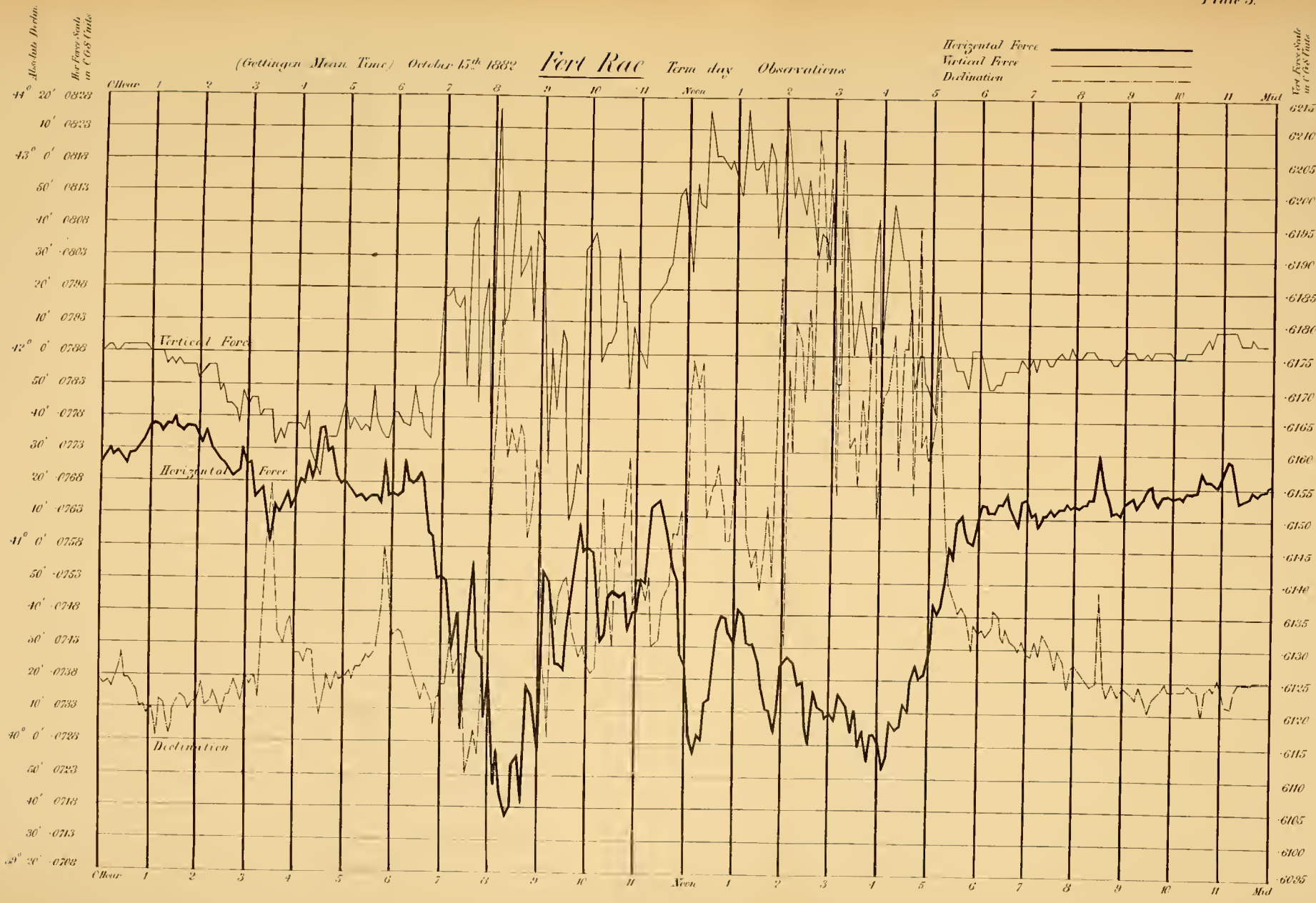
increasing numbers denoting increase of force and of easterly declination. These are easily reduced to absolute values by means of the above scale values, and the tables of hourly magnetic observations. For the values there given correspond, at any hour of local mean time to the reading given here (or when three readings are given, to their mean) and from the nearest hourly observations the value of any intermediate observation can be deduced.

When three readings of the same instrument are recorded opposite any hour, the middle reading was taken at that hour, the others at 2 minutes before and after respectively.

(Gottingen Mean Time. September 15th 1852. Fort Rae. Term day. Observations.
Horizontal Force
Vertical Force
Declination
Absolute Decln
Hor Force Scale in C.G.S. Units
Vert Force Scale in C.G.S. Units
0Hour 1 2 3 4 5 6 7 8 9 10 11 Noon 1 2 3 4 5 6 7 8 9 10 11 Mid
20' 10' 41° 0' 50' 40' 30' 20' 10' 40° 0' 50' 40° 30' 20' 39°
·0773 ·0768 ·0763 ·0758 ·0753 ·0748 ·0743 ·0738 ·0733 ·0728 ·0723 ·0718 ·0713
·6205 ·6200 ·6195 ·6190 ·6185 ·6180 ·6175 ·6170 ·6165 ·6160 ·6155 ·6150 ·6145
Horizontal Force
Vertical Force
Declination
* Te 42°.7 at 6 35 a m
† Te 42°.9 at 7 50 a m
‖ Te 39°.9 at 8 0 a m
‡ Te 39°.0 at 8 30 a m

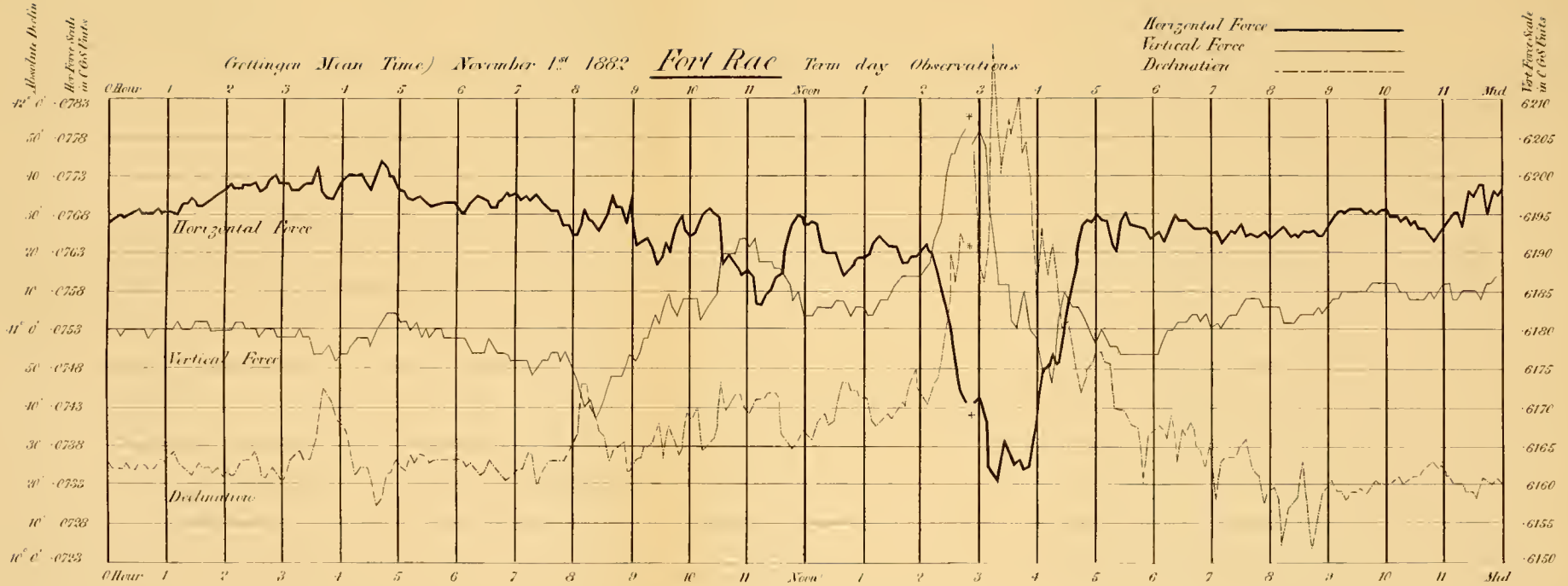


Darkenfield Lith 22 Bedford St Covent Garden 8/85 10376



Dangerfield Lith. 22 Bedford St. Covent Garden

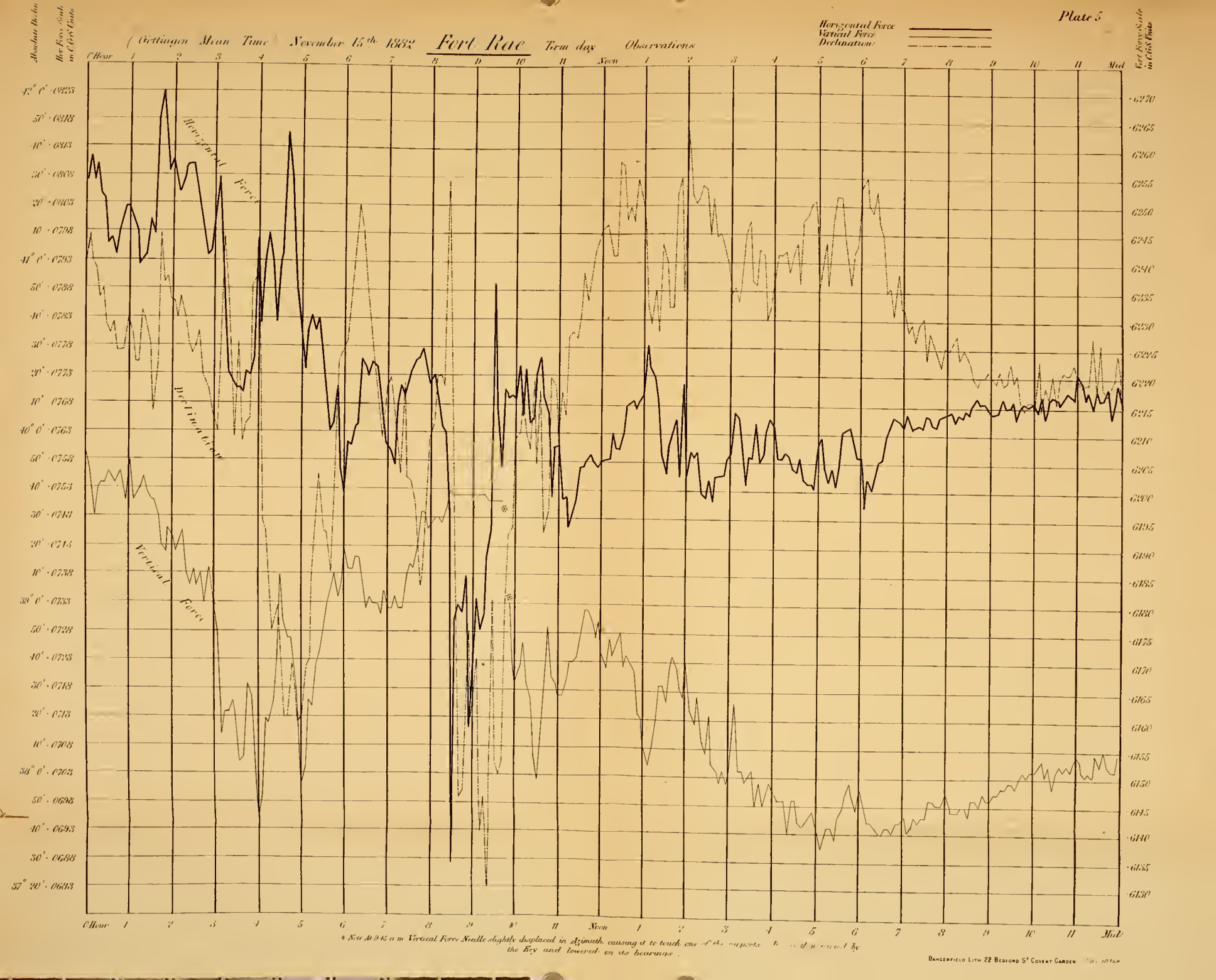
Plate 4



+ No Observations

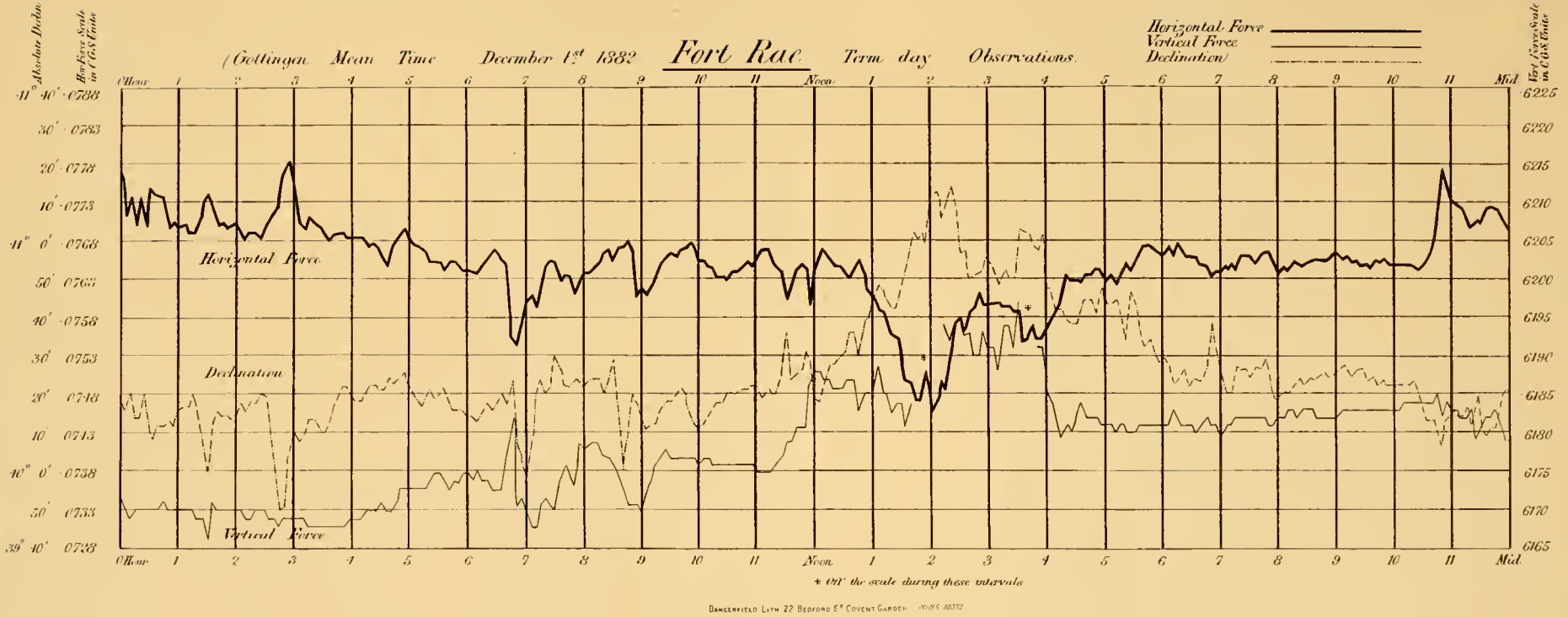
Dangerfield, Lith 22 Bedford St Covent Garden 8/83 10373

Plate 5



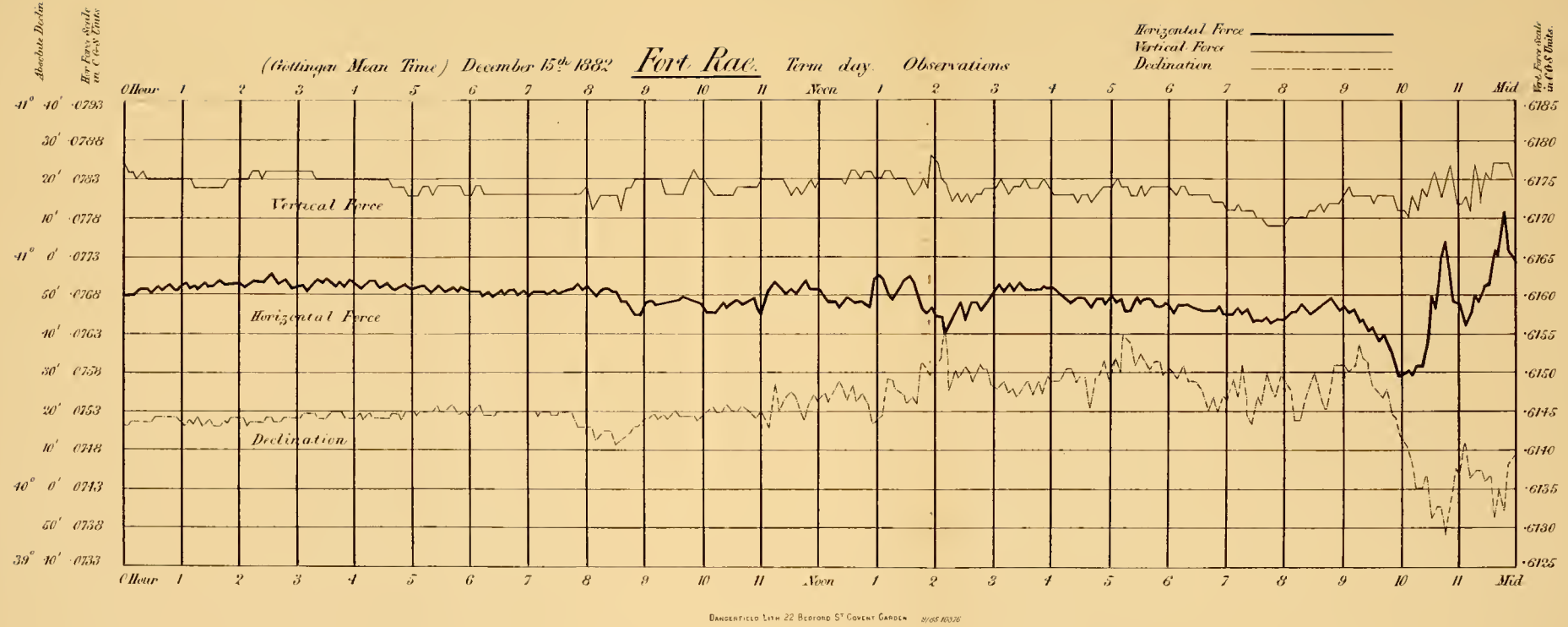
Dangerfield Lith 22 Bedford St Covent Garden

Plate 6.



Dangerfield Lith 22 Bedford St Covent Garden N.B.S. 10372

Plate 7.



Dangerfield Lith 22 Bedford St Covent Garden 9/85 10376

Plate 8.

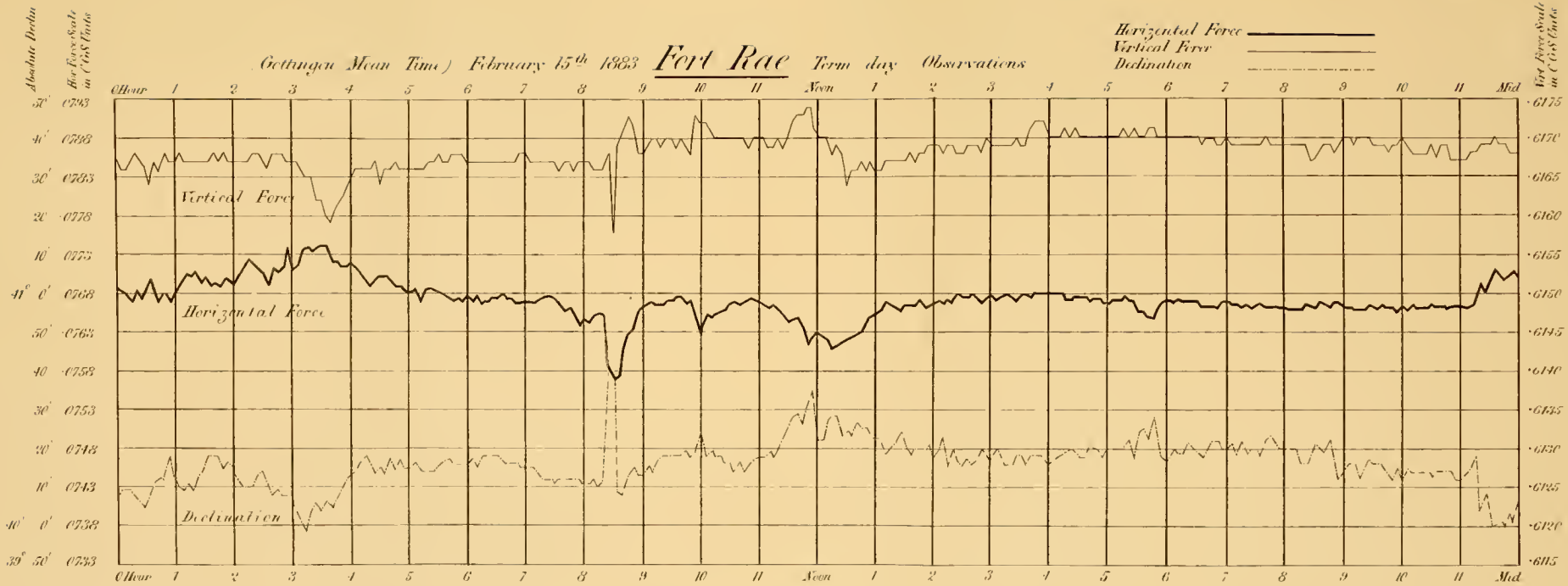
Bangerfield Lith 22 Bedford St Covent Garden 9/85 10319

Plate 9.

Bangerfield Lith 22 Bedford St Covent Garden

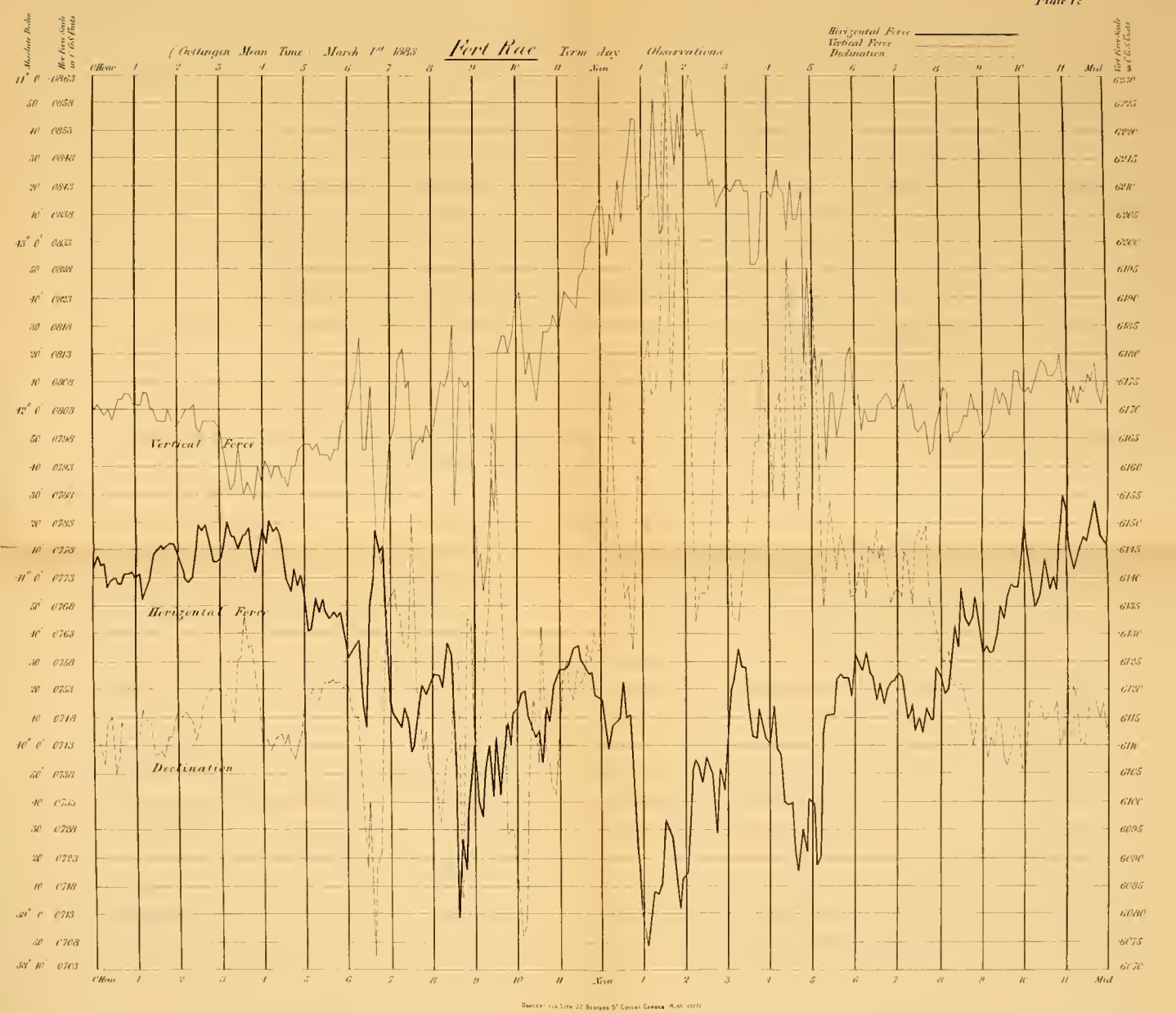
Dangerfield, Lith 22 Bedford St Covent Garden

Plate II.



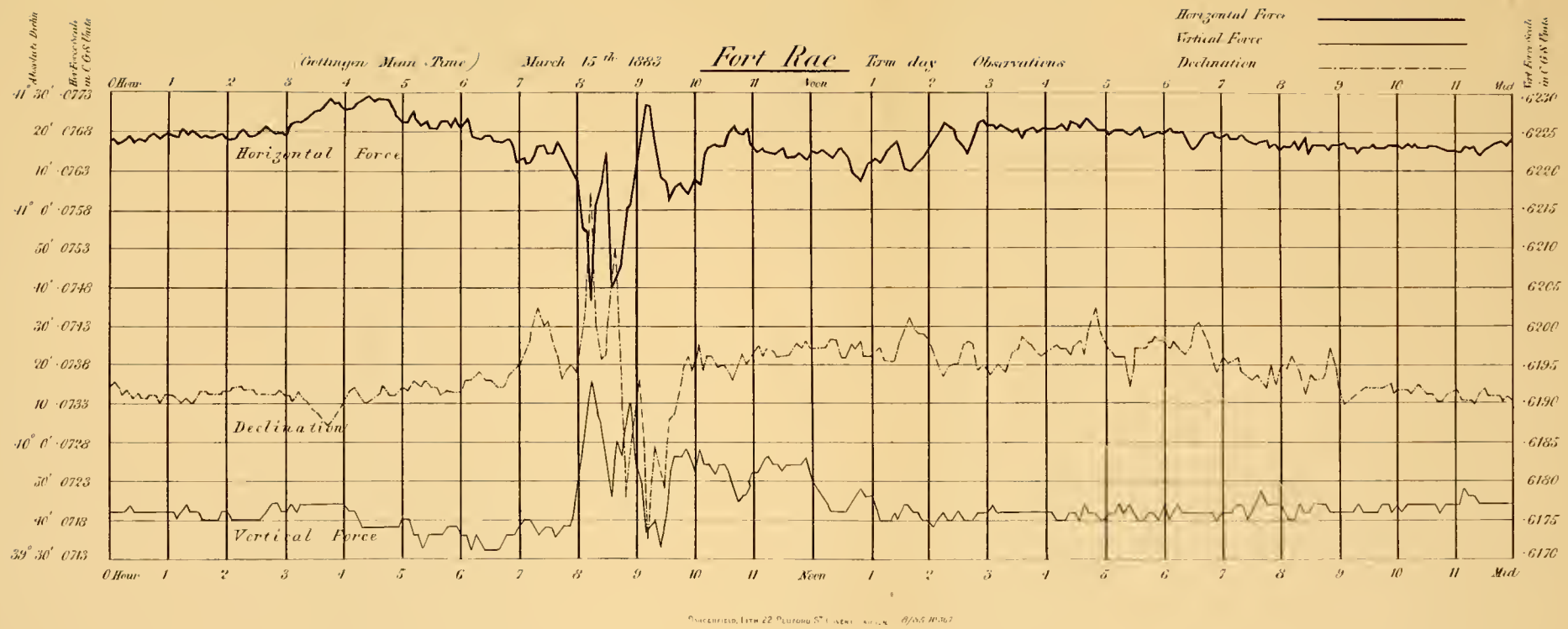
Dangerfield, Lith 22 Bedford Covent Garden 9/85 10378

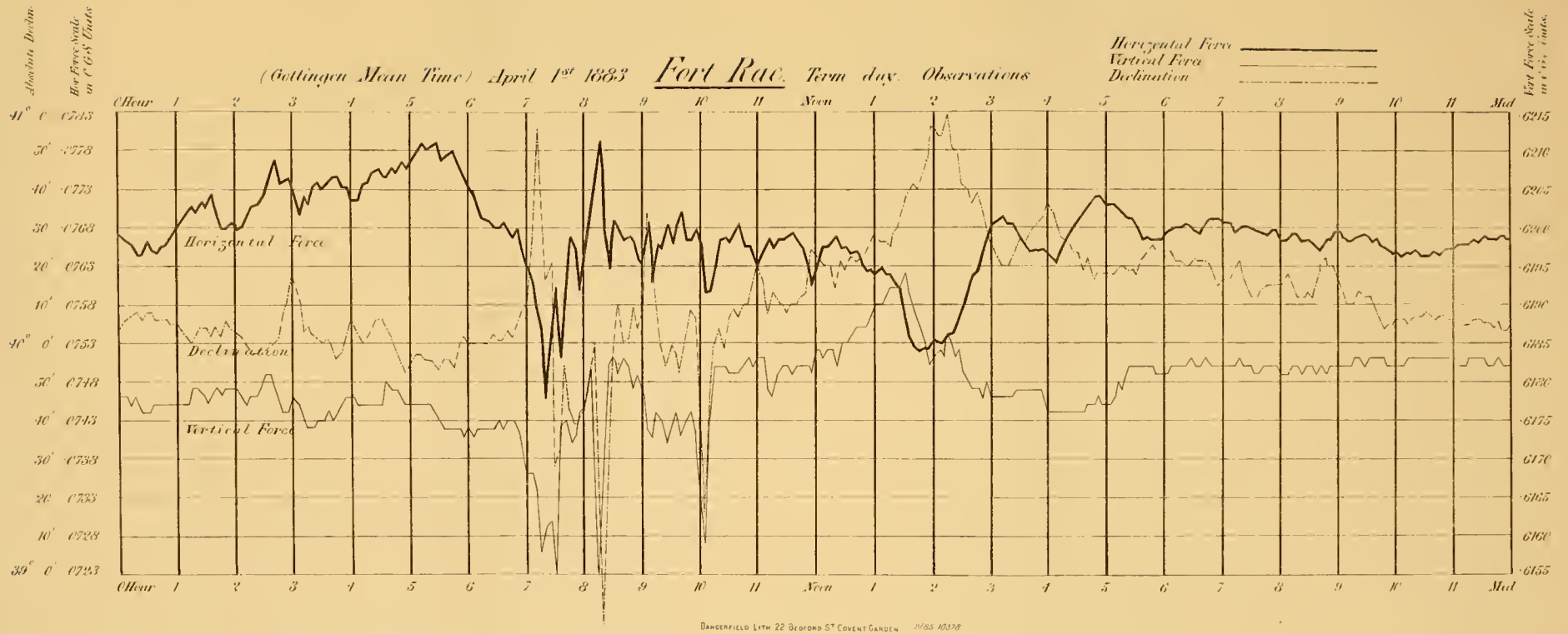
Plate 12



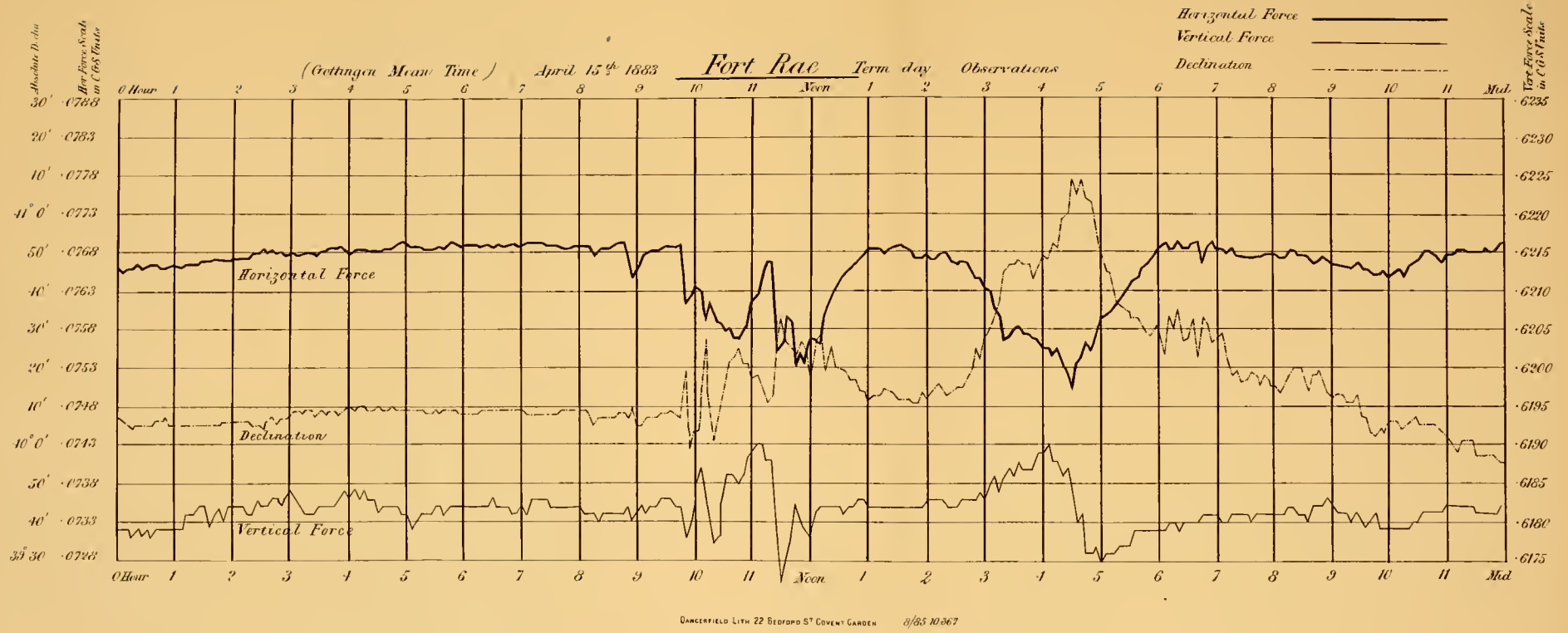
Fort Rae
(Gottingen Mean Time) March 1st 1885
Term day
Observations
Horizontal Force
Vertical Force
Declination
Vertical Force
Horizontal Force
Declination
Absolute Decline
Hor Force Scale in C.G.S. Units
Vert Force Scale in C.G.S. Units

Plate 13.

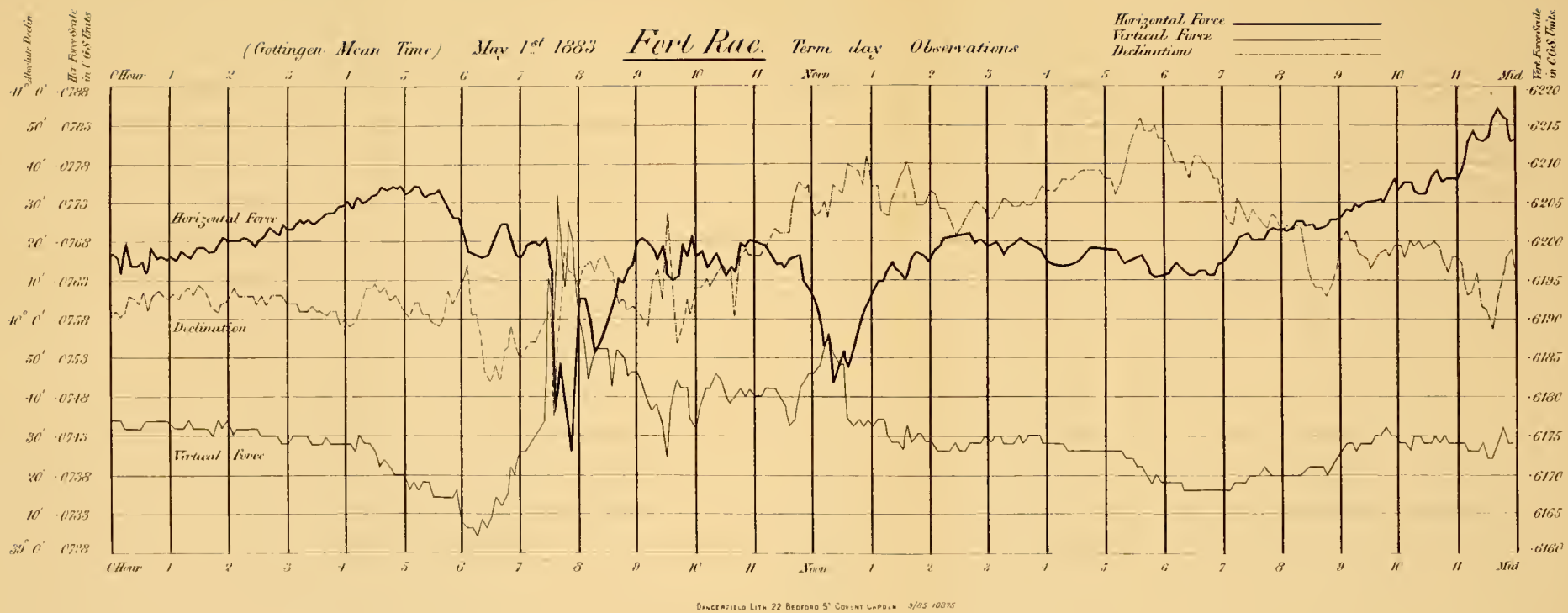

Horizontal Force
Vertical Force
Declination
(Gottingen Mean Time) March 15th 1883
Fort Rae Term day Observations
Horizontal Force
Declination
Vertical Force
0 Hour 1 2 3 4 5 6 7 8 9 10 11 Noon 1 2 3 4 5 6 7 8 9 10 11 Mid
41° 30' 20' 10' 41° 0' 50' 40' 30' 20' 10 40° 0' 50' 40' 39° 30'
·0773 ·0768 ·0763 ·0758 ·0753 ·0748 ·0743 ·0738 ·0733 ·0728 ·0723 ·0718 ·0713
·6230 ·6225 ·6220 ·6215 ·6210 ·6205 ·6200 ·6195 ·6190 ·6185 ·6180 ·6175 ·6170



Dangerfield Lith 22 Bedford St Covent Garden 9185 10378

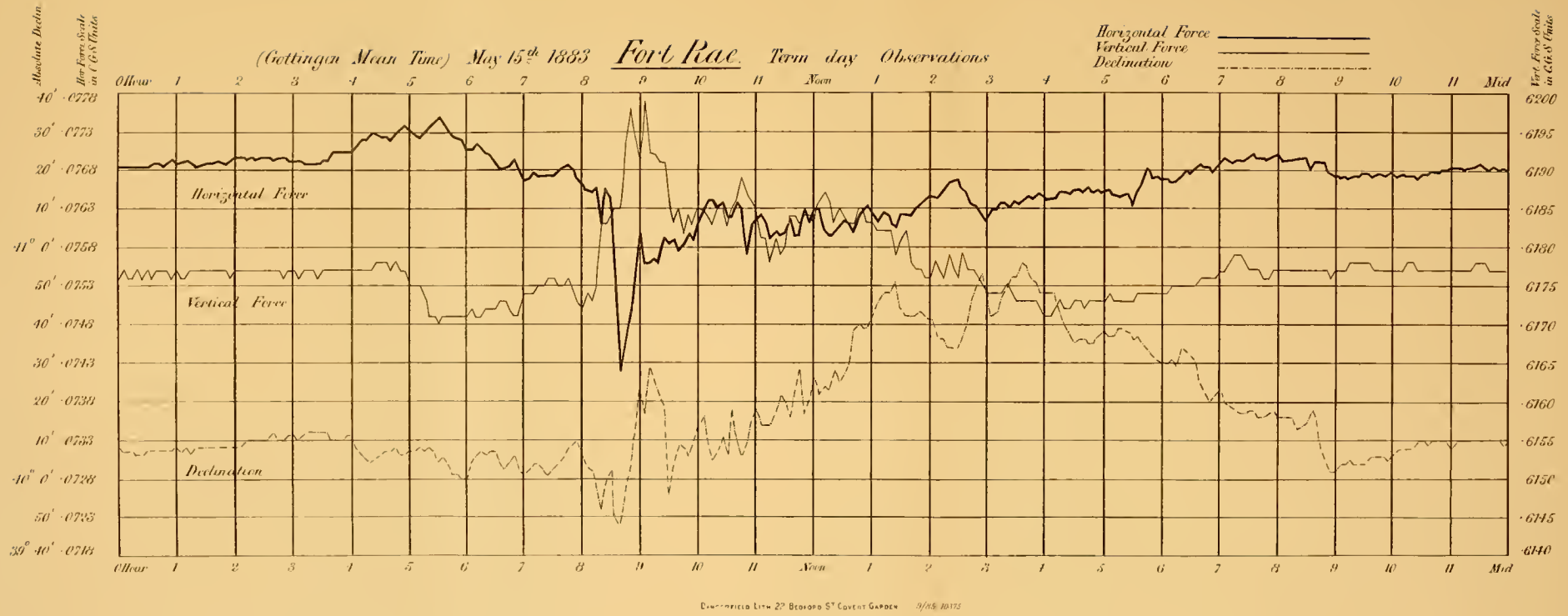


Dangerfield Lith 22 Bedford St Covent Garden 8/85 10867



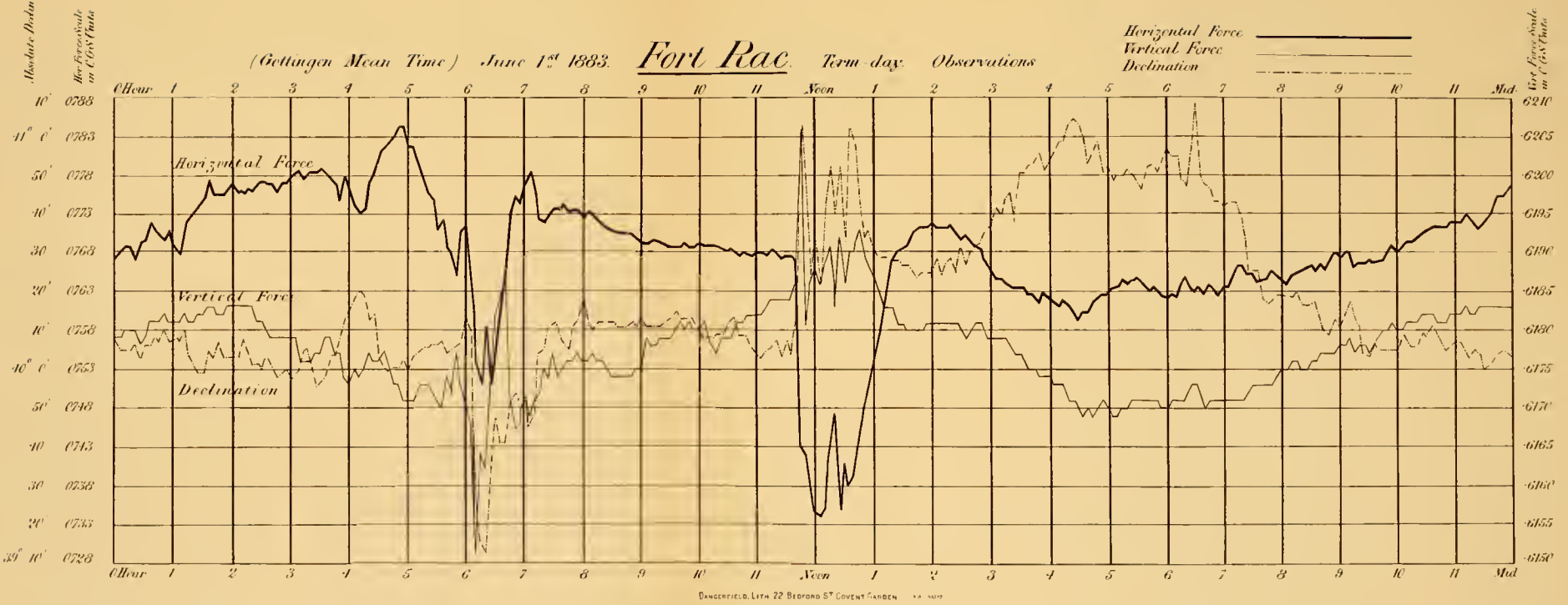
Dangerfield Lith 22 Bedford St Covent Garden 3/85 10375

Plate 17

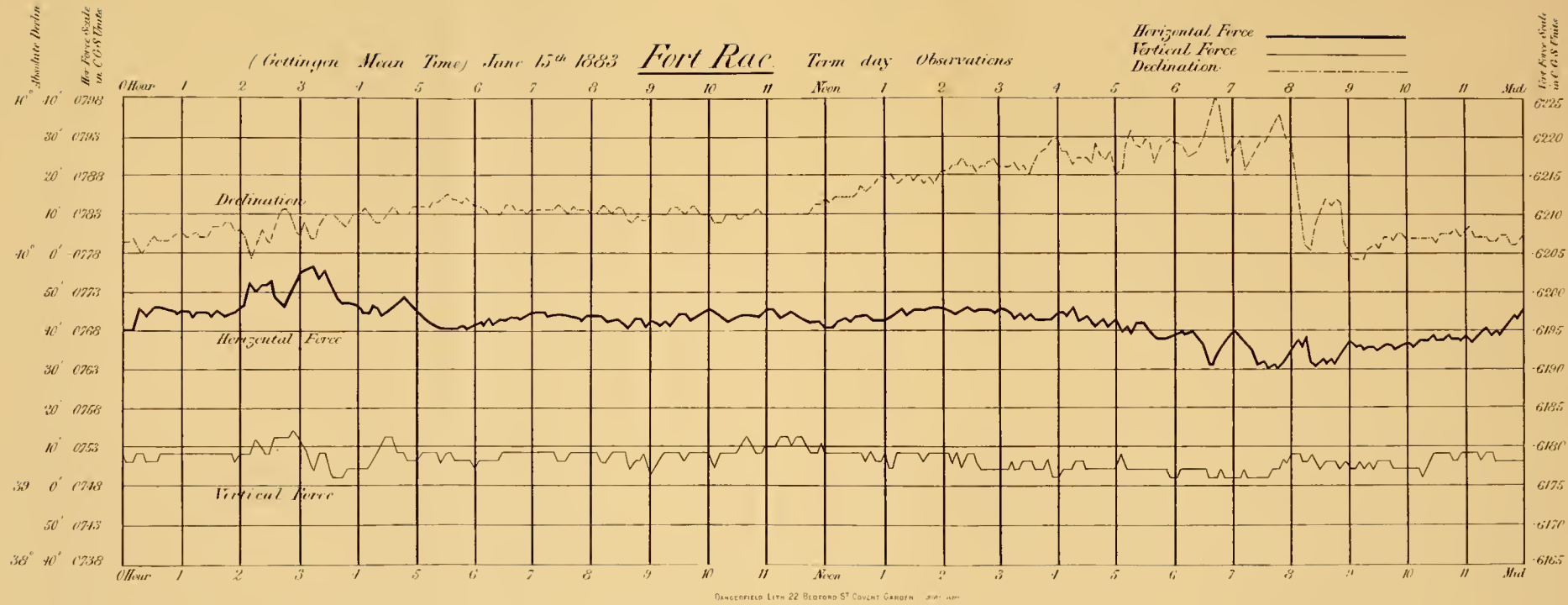


Dangerfield Lith. 27 Bedford St Covent Garden

Plate 18.

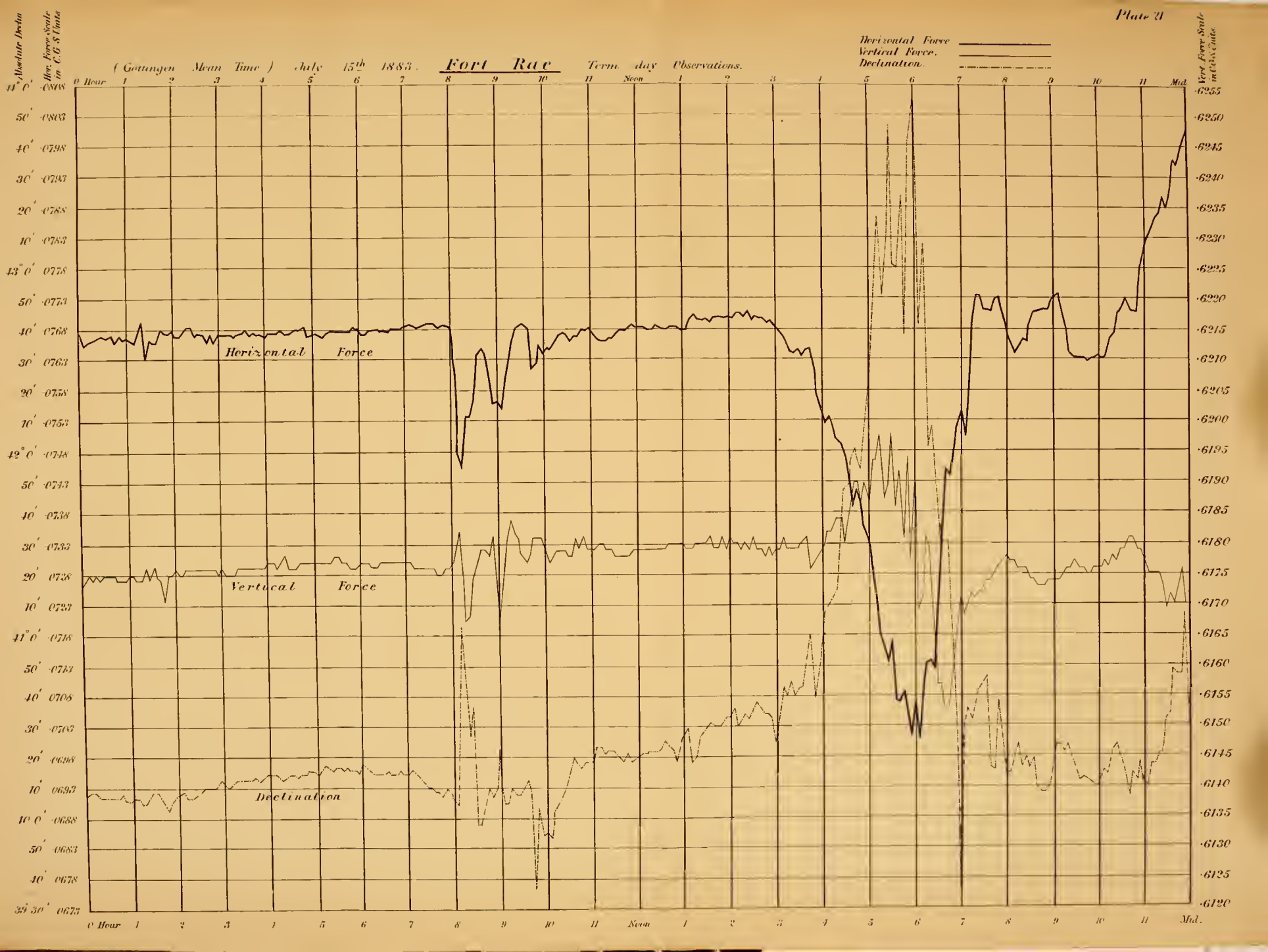


Dangerfield, Leith 22 Bedford St Covent Garden



Dangerfield Lith 22 Bedford St Covent Garden

Dencenfield Lith. 22 Bedford St. Covent Garden


Horizontal Force
Vertical Force.
Declination.
(Göttingen Mean Time) July 15th 1883. Fort Rae Term. day Observations.
Horizontal Force
Vertical Force
Declination
Abs. Hor. Force Scale in C.G.S. Units
Vert. Force Scale in C.G.S. Units
0 Hour 1 2 3 4 5 6 7 8 9 10 11 Noon 1 2 3 4 5 6 7 8 9 10 11 Mid.
41° 0′ ·0808
50′ ·0803
40′ ·0798
30′ ·0793
20′ ·0788
10′ ·0783
43° 0′ ·0778
50′ ·0773
40′ ·0768
30′ ·0763
20′ ·0758
10′ ·0753
42° 0′ ·0748
50′ ·0743
40′ ·0738
30′ ·0733
20′ ·0728
10′ ·0723
41° 0′ ·0718
50′ ·0713
40′ ·0708
30′ ·0703
20′ ·0698
10′ ·0693
40 0′ ·0688
50′ ·0683
40′ ·0678
39 30′ ·0673
·6255
·6250
·6245
·6240
·6235
·6230
·6225
·6220
·6215
·6210
·6205
·6200
·6195
·6190
·6185
·6180
·6175
·6170
·6165
·6160
·6155
·6150
·6145
·6140
·6135
·6130
·6125
·6120

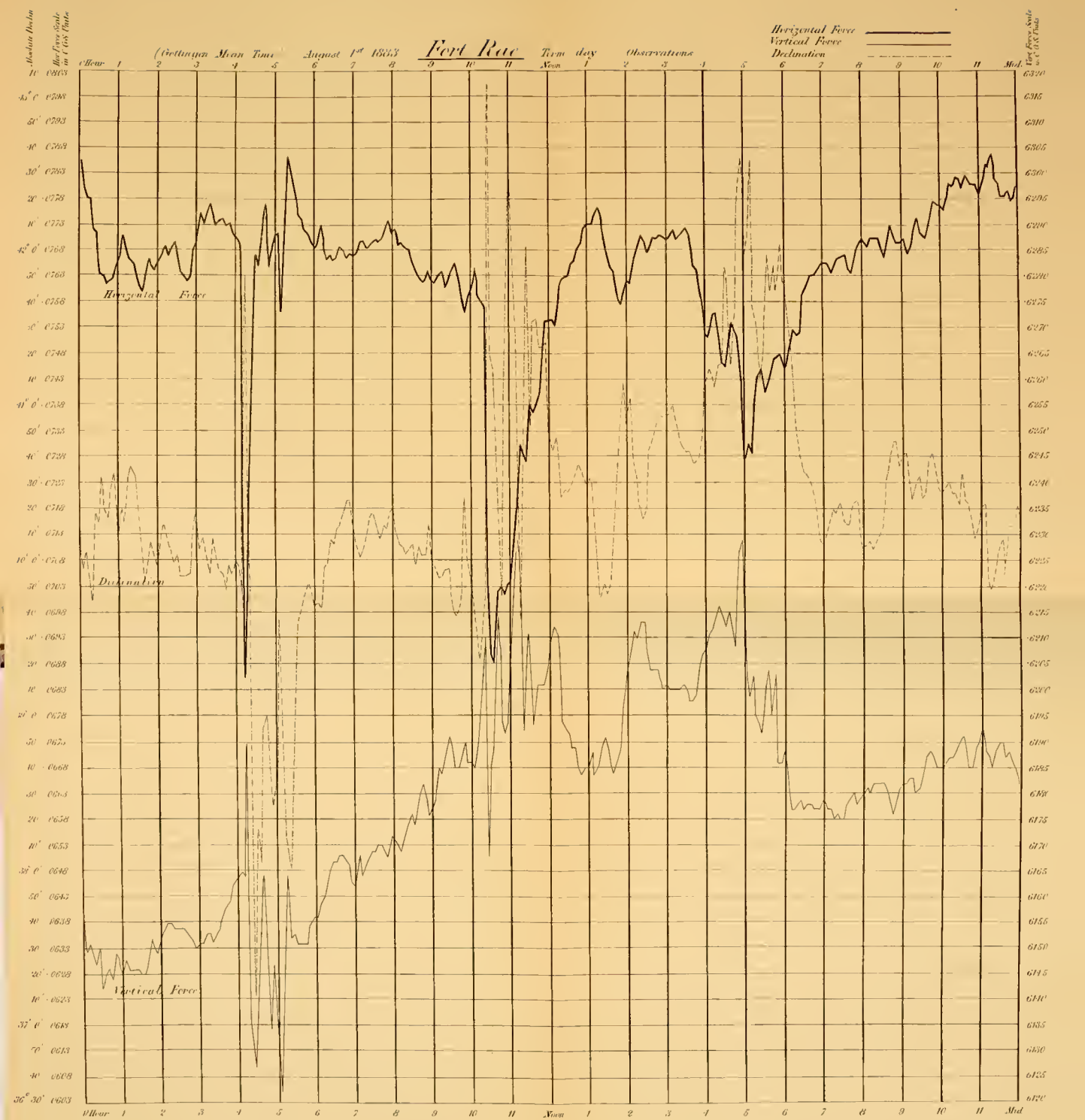

Fort Rae
August 1st 1853
(Gottingen Mean Time
Term day
Observations
Horizontal Force
Vertical Force
Declination
Horizontal Force
Declination
Vertical Force
Noon
Midn

Plate 23.

Dangerfield Lith 22 Bedford St Covent Garden

Fort Rae

Term hour Declinometer Observations

(Gottingen Mean Time)

Absolute Decline

September 15th 1882 3 p m to 4 p m

October 1st 1882 4 p m to 5 p m

For October 15th see Plate 28.

November 1st 1882 6 p m to 7 p m

November 15th 1882 7 p m to 8 p m

December 1st 1882 8 p m to 9 p m

December 15th 1882 9 p m to 10 p m

January 2nd 1883 10 p m to 11 p m

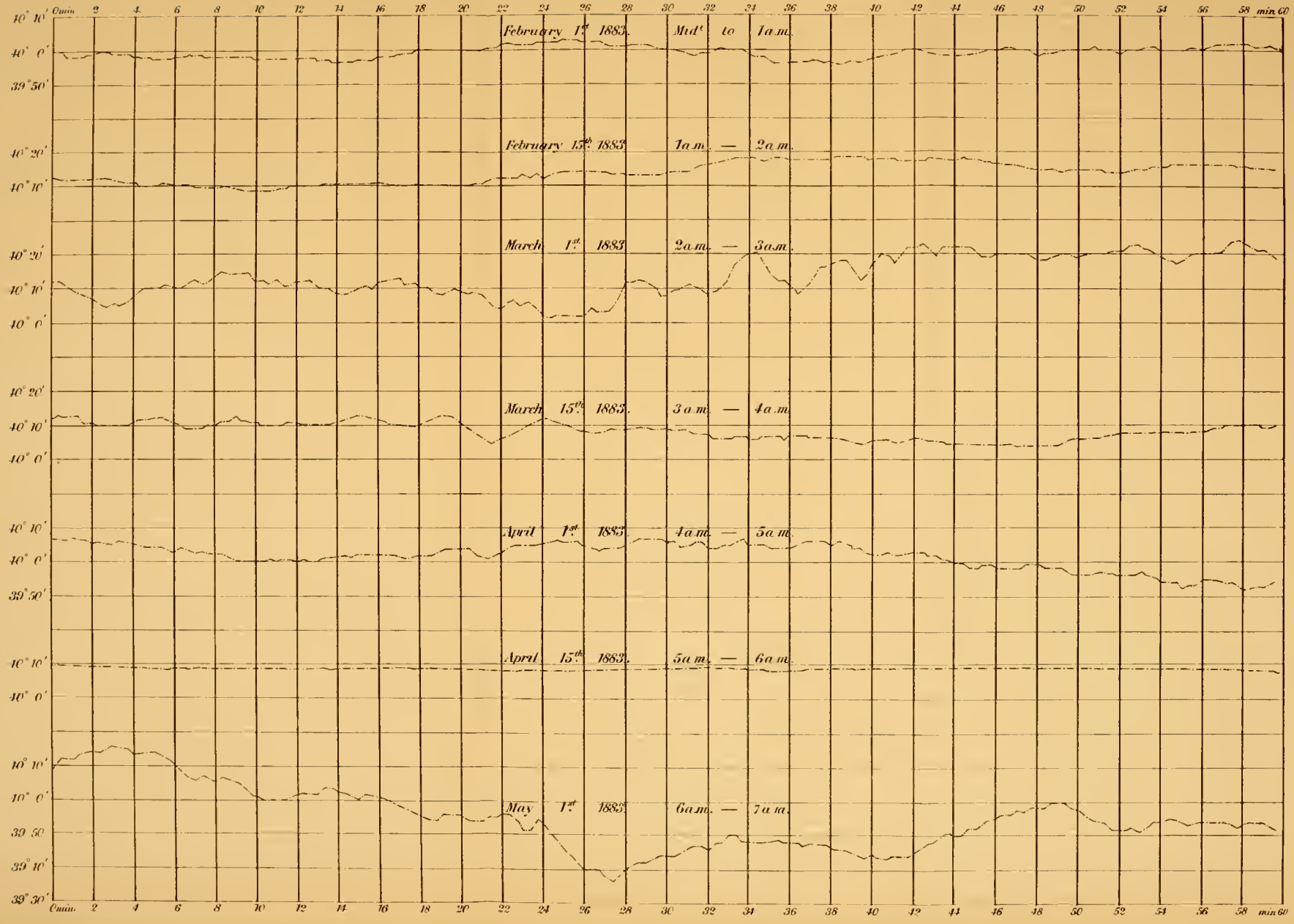
January 15th 1883 11 p m to Mid.

Dangerfield Lith 22 Bedford St Covent Garden

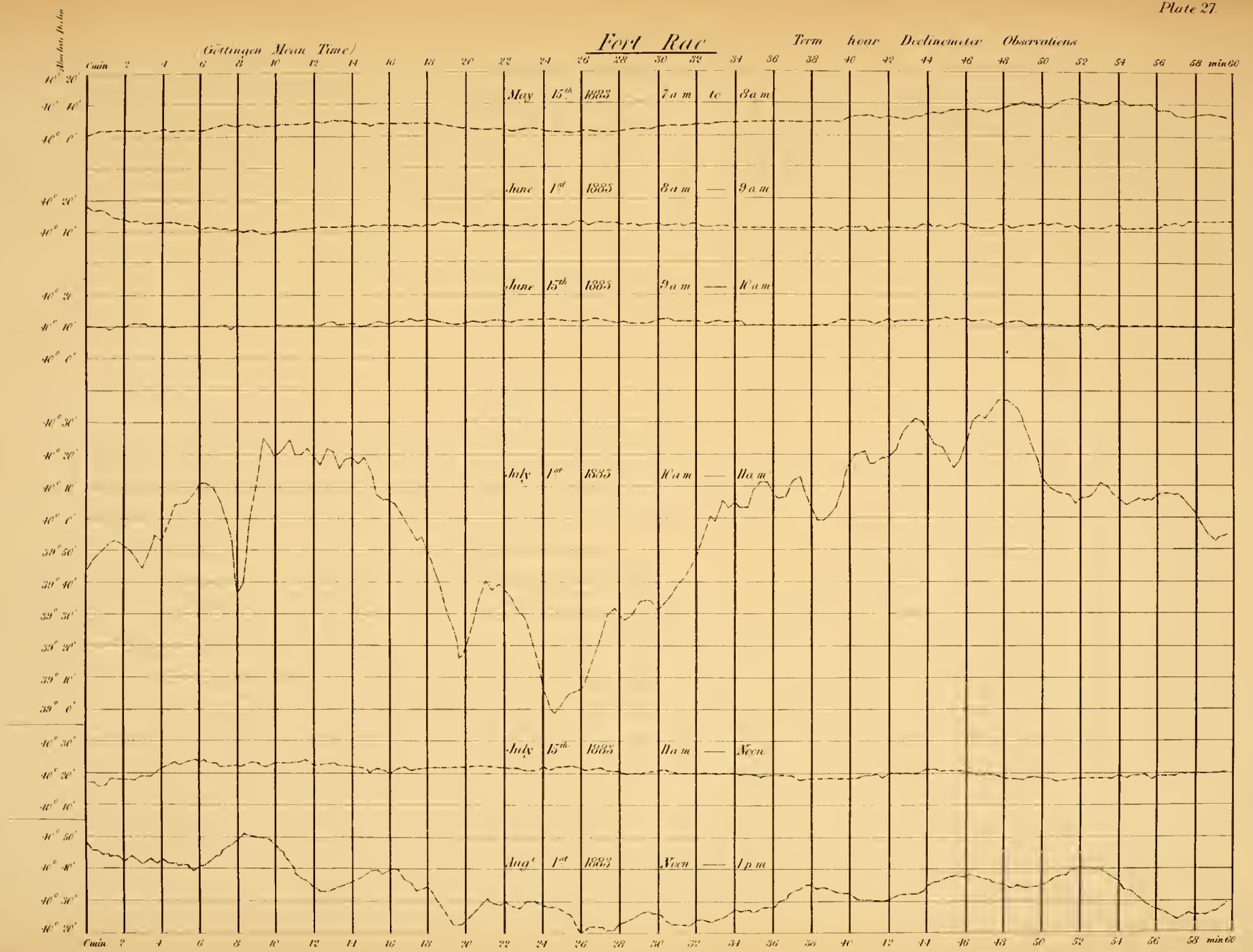
Plate 25

Dangerfield, Lith 22 Bedford St Covent Garden 4/85 10373

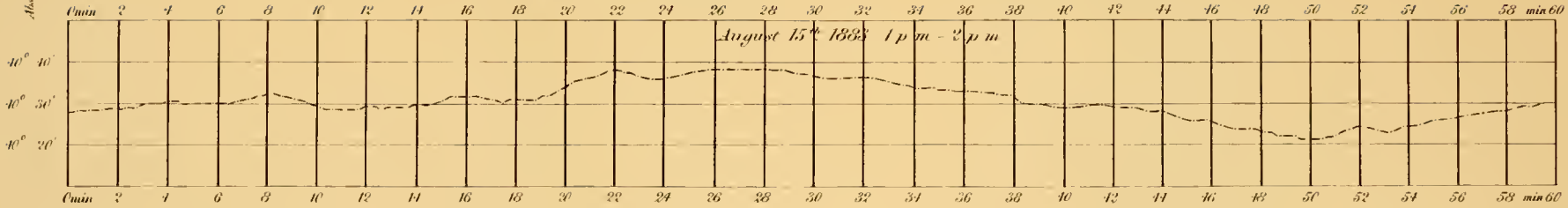
Göttengen Mean Time **Fort Rae** Term Hour Declinometer Observations



Dangerfield, Lith 22 Bedford St Covent Garden 70366/3 85


Fort Rae
Term hour Declinometer Observations
(Göttingen Mean Time)
Absolute Declination
May 15th 1883 7 a m to 8 a m
June 1st 1883 8 a m — 9 a m
June 15th 1883 9 a m — 10 a m
July 1st 1883 10 a m — 11 a m
July 15th 1883 11 a m — Noon
Aug.t 1st 1883 Noon — 1 p m
0min 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 min60
40° 20′
40° 40′
40° 0′
40° 20′
40° 40′
40° 0′
40° 20′
40° 40′
40° 0′
39° 50′
39° 40′
39° 30′
39° 20′
39° 10′
39° 0′
40° 30′
40° 20′
40° 10′
40° 50′
40° 40′
40° 30′
40° 20′

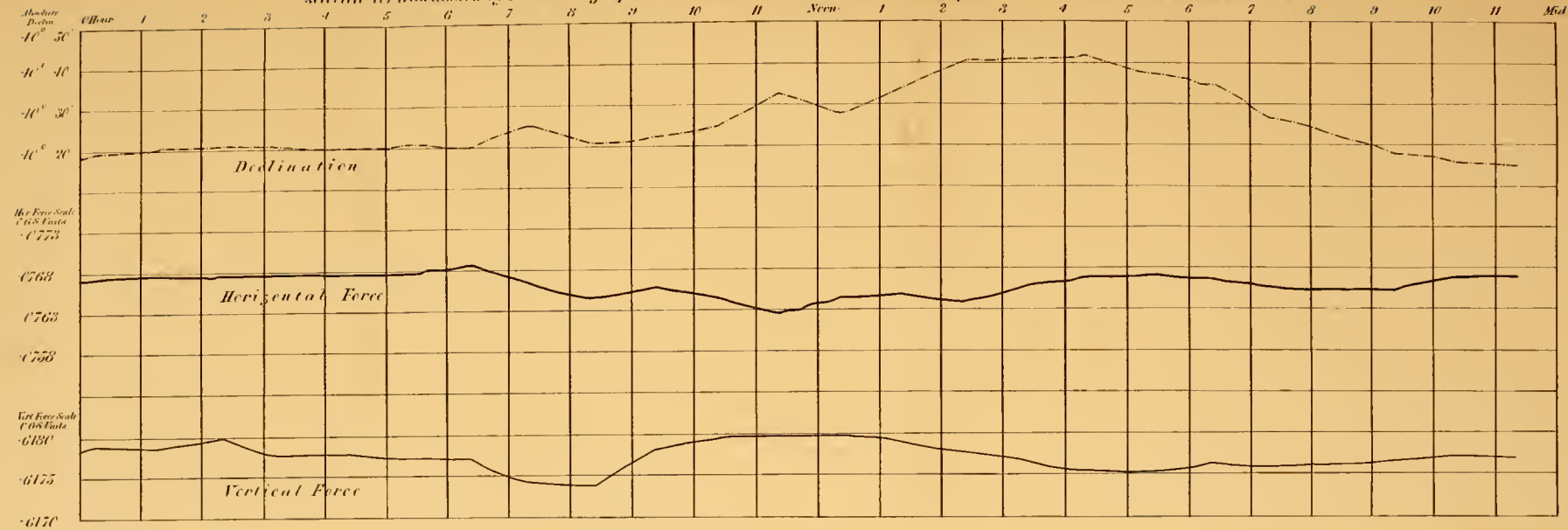
(Gottingen Mean Time) **Fort Rae** Term hour Declinometer Observations.



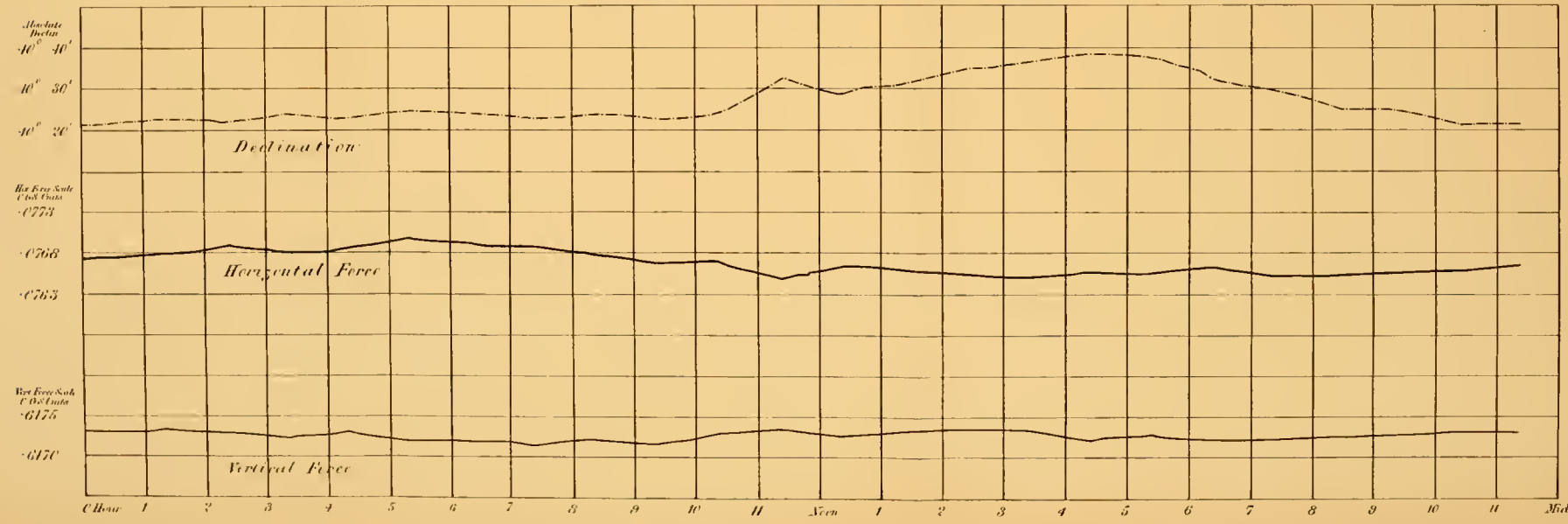
Dangerfield Lith 22 Bedford St Covent Garden 9/85 1038

Gottingen Mean Time **Fort Rae** Magnetic Observations

These curves are plotted from the means of hourly readings of the following undisturbed days selected for discussion by Dr Wild viz. September 16th 21st 29th 30th 1882. and August 4th 9th 10th 16th 17th and 31st 1883.



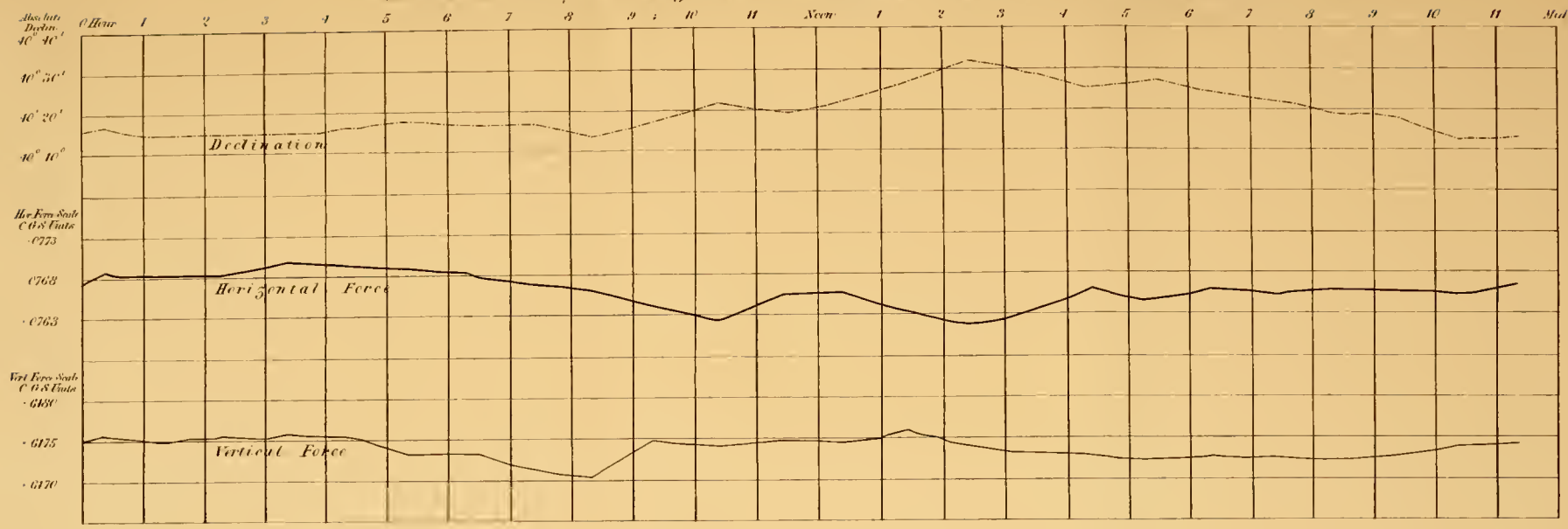
October 1st 19th 20th 21st and November 4th 10th 11th and 29th 1882.



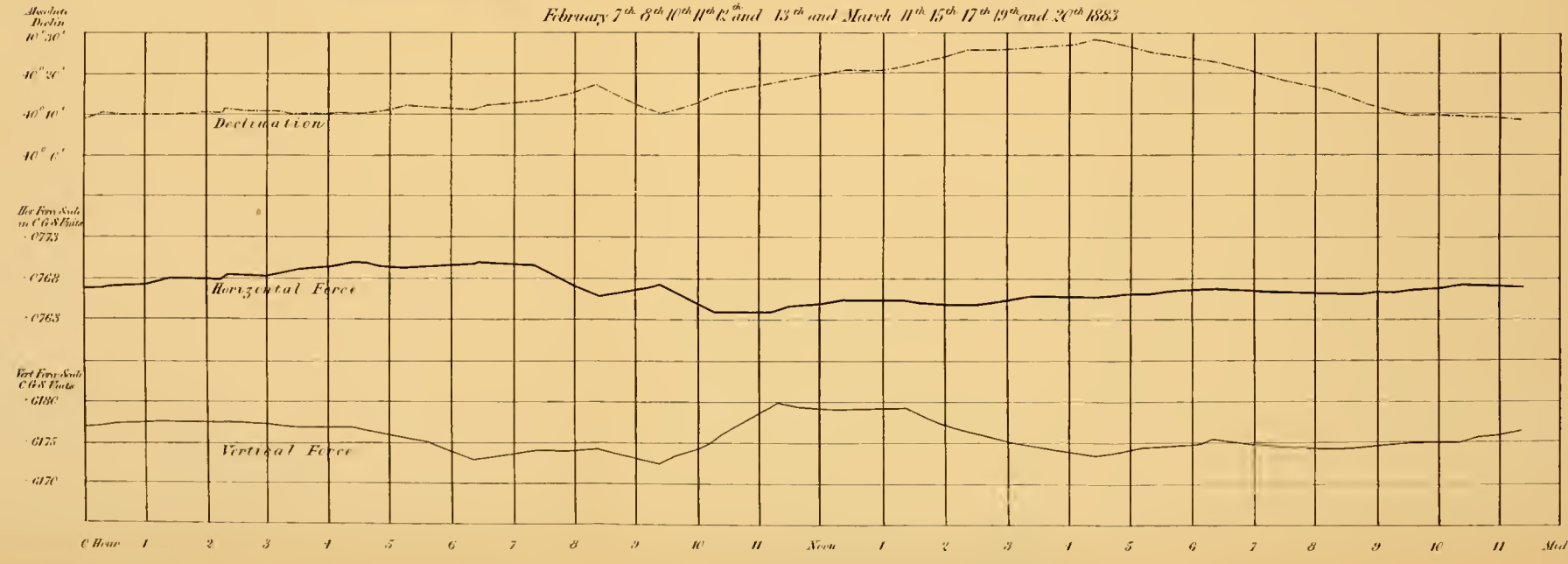
Underfield Lith 22 Bedford St Covent Garden

Göttingen Mean Time *Fort Rae* Magnetic Observations

These curves are plotted from the means of hourly readings of the following undisturbed days selected for discussion by Dr Wild viz December 6th 8th 14th 15th 1882 and January 2nd 3rd 11th 13th and 23rd 1883



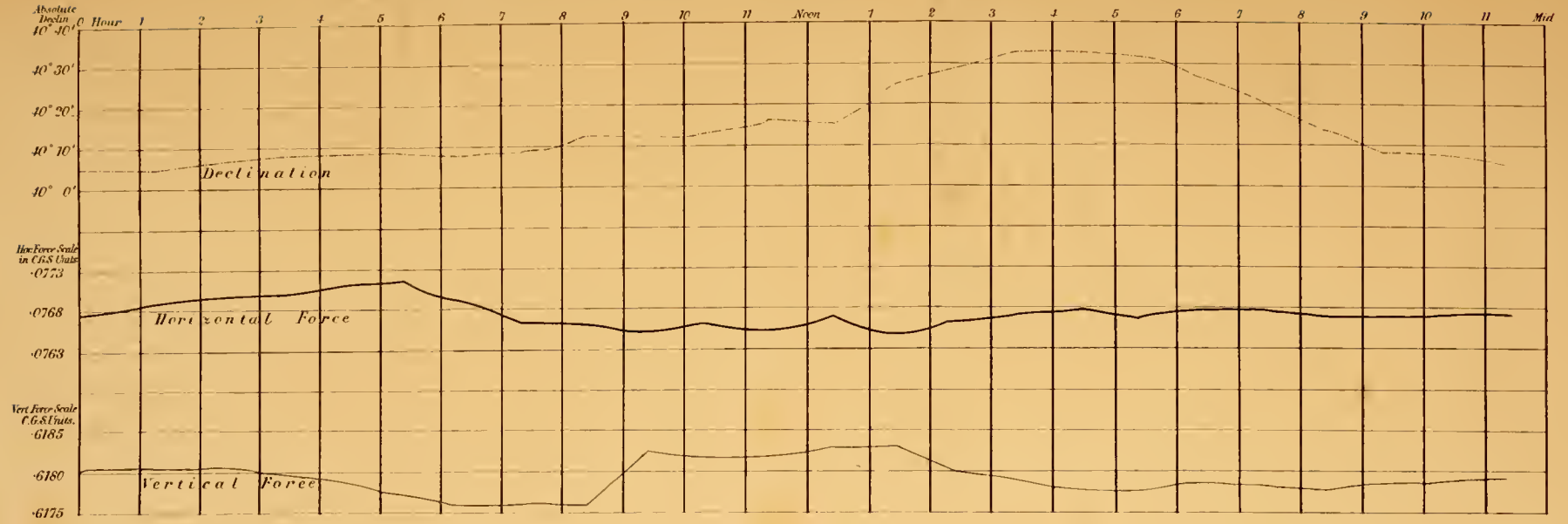
February 7th 8th 10th 11th 12th and 13th and March 11th 15th 17th 19th and 20th 1883



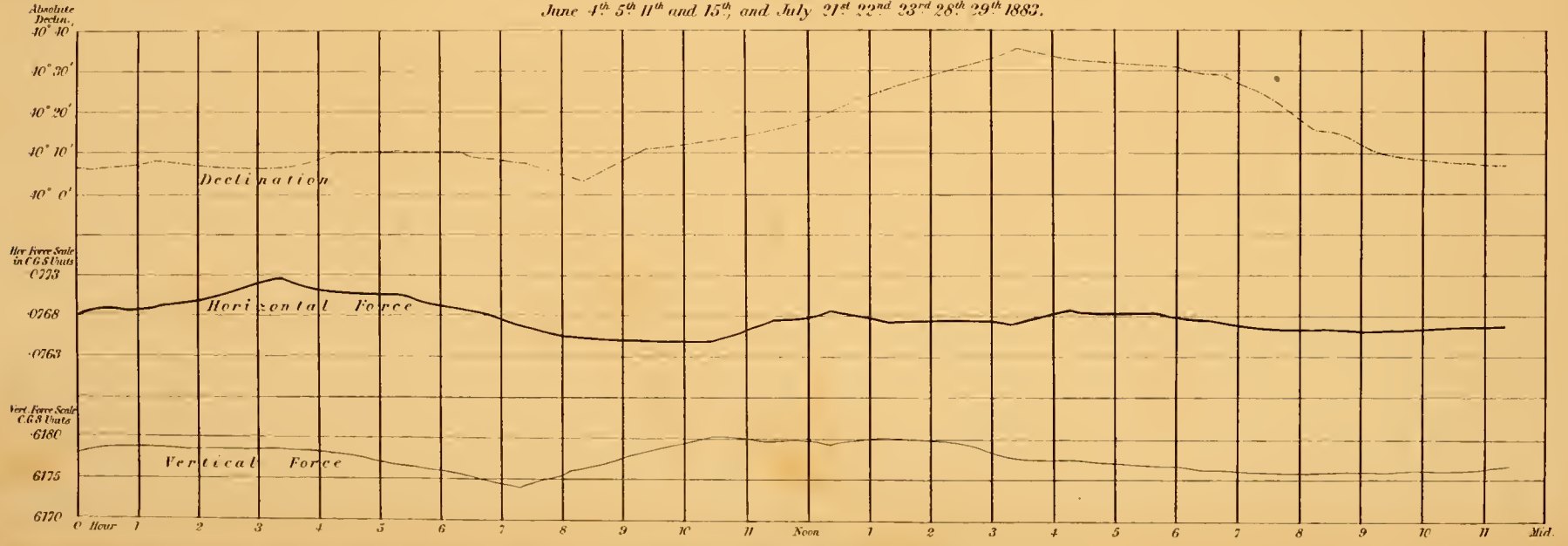
Dangerfield Lith 22 Bedford St Covent Garden

Göttingen Mean Time **Fort Rae** Magnetic Observations.

These curves are plotted from the means of hourly readings of the following undisturbed days selected for discussion by Dr Wild, viz:- April 10th 14th 17th 21st 22nd 23rd and May 9th 10th 11th 12th 13th and 15th 1883.



June 4th 5th 11th and 15th, and July 21st 22nd 23rd 28th 29th 1883.



Dangerfield. Lith 22 Bedford St Covent Garden 10,364/8 85

(Gottingen Mean Time) **Fort Rae** Magnetic Observations

These curves are plotted from the means of the hourly readings of the whole of the undisturbed days selected for discussion by Dr Wild

Dangerfield Lith 22, Bedford St Covent Garden 3/85 10894